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AMERICAN ARTISAN and Hardware Record

VOL. 72. No. 8. CHICAGO, AUGUST 19, 1916. $2.00 Per Year.

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Bring Health, Pleasure and Comfort to the Home

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ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, 52 and 53

We Will Tell You Why There Is A Big Demand For

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¶ It is because they *are* All-Steel. The body is rolled from a single plate of steel, securely riveted together in one place only.

¶ Absolutely gas and dust tight.

¶ No asbestos packing used.

¶ Will radiate more heat than either cast or wrot iron warm air heaters.

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Marshalltown, Iowa

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to ventilate school rooms as to heat them

Parents and school officials are realizing that it is just as necessary to ventilate school rooms as to heat them—it is plainly evident that foul and vitiated air should not be reheated and breathed again and again, but should be passed out of the room through a ventilator.

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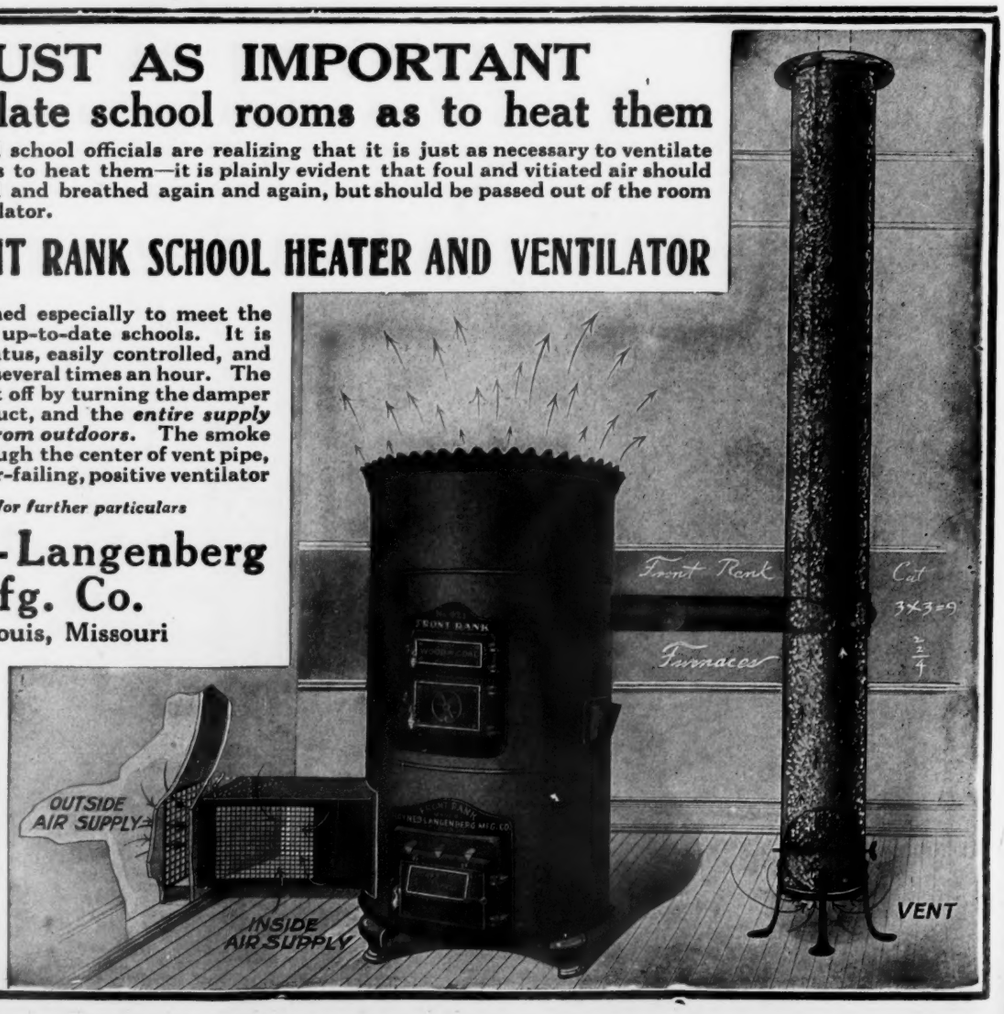

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ESTABLISHED 1880
Representative of
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Heating and Ventilating Interests
PUBLISHED EVERY SATURDAY

AMERICAN ARTISAN and Hardware Record

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VOL. 72. No. 8. CHICAGO, AUGUST 19, 1916. $2.00 Per Year.

Advertising Campaign for Sheet Metal Necessary.

THERE IS NO gainsaying the fact that while the production of sheet metal has increased at a wonderful rate during the past twenty-five years, the sheet metal contractor has lost much of the business which formerly was regarded almost as his exclusive field.

Cornices, ceilings, roofings are being made of many other materials, and the manufacturers of these later products, such as terra cotta, so-called "ready roofing," plaster Paris, etc., have made it a point to tell the house owners and builders and owners of large business and residence property of the desirable features of their products, while the manufacturers of sheet metal and the sheet metal contractors have made little or no effort to counteract the aggressiveness of these newer competitors in their field.

It is true that in a few isolated cases manufacturers of sheet metal have endeavored to impress the superiority of sheet metal, for instance as a roofing material, upon building owners, and that a pitifully small number of sheet metal contractors have been faithful to their trade and boosted for sheet metal as a "preferable" building material, but in the altogether too large majority of cases, the opposite is the fact: *No intelligent and consistent effort has been made to prove and maintain the superiority of sheet metal to those who must be convinced—the owners and builders.*

The result has been nothing more than could be reasonably expected: Other materials have taken the place of sheet metal in building construction—with the consequent loss of business and profit, both to the manufacturer and contractor.

If this loss of business and profit had been the only result, the "consumer"—property owner in this case—might not have any particular reason to complain. In fact, he might be indifferent to the matter altogether. But the worst feature of the entire situation is that he has been the greatest sufferer, because he has been induced to use materials which—no matter how you look at the proposition—are in every way inferior to sheet metal, of good quality and properly constructed.

It is an easy matter to find instances to prove this assertion. There does not happen a fire which does not demonstrate either the failure of wooden shingles or prepared roofing to protect other buildings against flying embers from the burning building, or the safety against catching fire furnished by a sheet metal roof.

On pages 39 and 40 of this issue of AMERICAN ARTISAN an article is published in which specific instances of this sort are given—all of very recent occurrence.

Any windstorm will produce proof that tile, slate or wood shingle roofs, no matter how well laid, cannot withstand the onslaught of heavy winds, while sheet metal roofs remain undamaged.

Examine the roofs on the buildings on any street, and it will be found that wooden shingle, tiles, slates, "ready" roofings in the various forms, in comparatively short time will need repairs of some sort, that leaks are of frequent occurrence and extremely difficult to repair or prevent on roofs constructed of these materials, while metal roofs have been known in numerous instances to outlive the buildings which they covered.

But while these facts are encouraging they are of little or no value unless those who manufacture, sell and install sheet metal roofing make the proper use of them by bringing them to the attention of builders and owners of buildings in an efficient manner.

For some time there has been considerable talk about an advertising campaign, to be conducted in a co-operative way by the manufacturers of sheet metal, the purpose of which would be to prove to the general public the many points of advantages of sheet metal as a building material—for roofings, ceilings, cornices, etc.

A committee was appointed to consider or prepare plans for such an advertising campaign at the meeting of the Metal Branch of the National Hardware Association, held in Pittsburgh last May.

The Trade Development Committee of the National Association of Sheet Metal Contractors has gone on record and the Association at its recent Annual Convention endorsed its recommendation, in favor of such a national advertising campaign.

The newly organized National Association of Sheet and Tin Plate Manufacturers will also make this matter one of the important features of its activities.

It is thus to be hoped that in the not too distant future, definite steps will be taken to once more place sheet metal in its many various, attractive forms in its proper position—as a safe building material of far superior merit to many of those which have lately taken its place.

AMERICAN ARTISAN has for a long time advocated and urged that something definite of this nature be done, and this publication shall continue to spread the gospel of good quality sheet metal as a building material of superior merit—to the end that the entire sheet metal industry—from the manufacturer to the

contractor and his workmen—may secure the business and profit to which the desirability of the product will entitle them if they will but make an intelligent, consistent effort to secure it.

Government Aid for Small Business.

THIS VERY important point is brought up in the July review of business conditions issued by the National City Bank of New York City: Shall the strong wait for the weak to catch up with them in the struggle for progress, or shall the weak be allowed to fall by the wayside?

The last question of these two actually represents the condition under which we have been doing business to a very large extent for the past fifty years. Our competitive system which by some is regarded as the "Life of Trade," until quite recently has made absolutely no allowance for the mediocre business man. Our labor unions, it is true, make an attempt to "protect" those of their number who by nature or inclination do not work as fast or as well as others, by demanding a minimum wage which must be paid to any member of the union employed in a shop or factory with a "union agreement." But in commercial and industrial business enterprises, it has been a case of doing the best you can, and "God help you if the 'big fellows' get after you."

The enactment of the Sherman Anti-Trust Law attempted to prevent certain glaring abuses of superior force in competition, but in its effect it has not been a shining success, and it was not until the passage of the Federal Trade Commission Act, two years ago, that a definite, constructive program began to take the place of mere prohibitive measures, for the purpose of guarding the interests of the small merchant and manufacturer against the possible onslaught of those of his competitors who were minded to use their greater financial resources to drive him out of business.

So today we have the Federal Trade Commission actually making it possible for the small business man —retailer, wholesaler, manufacturer—to secure with the help of the Commission, for instance, a true knowledge of his cost of doing business, the lack of knowledge of which has been the cause of more price cutting competition, and incidentally also of more business failures, than any other one thing.

On pages 25 to 28 of this issue of AMERICCAN ARTISAN AND HARDWARE RECORD an article is published giving in full the System of Accounts for Retail Merchants which has been prepared by the Federal Trade Commission, a careful study of which is recommended.

In this connection it should be remembered that the only really beneficial effect of competition that the consumer receives is that which is due to efficiency. Price cutting contests are always expensive to the consumer because even though he may "save" on some items, in the long run he has to make up for this by paying more than he ought to for other articles.

Competition based upon superior service, superior workmanship, superior ability in manufacture, by cutting out avoidable waste—that is the kind of competition which results in real benefits to the consumer, and that is the kind which should be encouraged, because by it not only the consumer, but the manufacturer and the distributor receives that to which he is entitled—in value, quality, pay for service rendered and profit on investment.

It is a matter for congratulation that the United States—its Government and its progressive business interests—are now committed to this far more sane and really constructive policy, and no doubt, the results will show the wisdom of the adoption of this policy.

Laborer Worthy of His Hire.

IT IS A remarkable fact that at this time when the manufacturers of this country are in dire need of correct and authoritative information as to the opportunities for Foreign Trade in their lines, as well as to the steps which must be taken by them to make the most of these opportunities, and thus develop and maintain a growing and profitable business with foreign countries, we should be handicapped by a condition which makes it extremely difficult for the Federal Government—in this case the Bureau of Foreign and Domestic Commerce—to place at the disposal of the manufacturers the services of men who are thoroughly posted on these matters.

The reason for this condition is that the men who have charge of the purse strings of the nation have so little vision of proportions that they vote $50,000 to $100,000 for a postoffice in some unimportant small town which would be just as efficiently served with a building costing $25,000 while they will not provide sufficient funds to make it possible to pay the salaries at which men who are able to give reliable information on export matters can be secured and kept for any length of time.

It is almost ridiculous for instance that the Bureau of Foreign and Domestic Commerce is restricted to paying its Commercial Agents—with less than half a dozen exceptions—$2,000 a year and that when on the road these men are not "allowed" more than $4.00 a day for their total expenditures.

This limitation becomes even more ridiculous when it is remembered that a Congressman for example, or even a state legislator receives "mileage" from the Government, amounting to 10 cents per mile when he travels and for instance in Illinois is paid a salary of $2,000 a year, although his services are required in no case longer than six months, while the United States Congressman who is paid $5,000 and only serves six months of the year and is permitted to attend to his own business at all times.

The result of this is that the Bureau of Foreign and Domestic Commerce cannot hold the men who can be of the greatest service to the manufacturers. Within the past few weeks, a number of highly experienced and thoroughly posted men have left the Bureau to become export managers for private enterprises, at salaries in many cases more than twice as large as the Bureau is allowed to pay them.

In fact the chief reason why the Bureau is in position to do as well as it does—and it renders a very efficient and extremely useful service—is that men accept positions with the Bureau in most instances

as stepping stones to positions at higher pay with private concerns.

It is to be hoped that the excellent work which the Bureau of Foreign and Domestic Commerce is doing will be appreciated to a greater extent by the next Congress at Washington and that a more liberal apportionment will be made for the Bureau's salary and expense fund.

RANDOM NOTES AND SKETCHES.

BY SIDNEY ARNOLD

"Tom" Usher, of the Russell and Erwin Manufacturing Company, who is inclined to tell some rather "tall" stories when he gets into "good company" up at the Hardware Club of Chicago, swears that this is an "absolutely true" occurrence, the particulars of which he overheard one day while he was serving as a juror in one of the Municipal Courts of Chicago:

A certain person was brought up before the judge with a charge of disorderly conduct and intoxication against him. The judge asked the defendant the usual question as to whether he desired to plead guilty or not guilty:

"Not guilty, sir," replied the prisoner.

"Where did you find the prisoner, officer?" asked the judge.

"In front of the Art Institute on Michigan Avenue, sir," was the reply.

"And what made you think he was intoxicated?"

"Well, sir, he kept throwing his walking-stick into the street and trying to entice one of the stone lions to go and fetch it."

* * *

Palmer Holmes, manager of the Chicago plant of Lalance and Grosjean Manufacturing Company, is a good story teller, as those who have the pleasure of his acquaintance know, and here is one of his latest:

A tight-fisted old man, feeling very sick, asked a friend to recommend a physician. The friend named a certain specialist.

"Is he very expensive?" asked the sick man.

"Well, not so very. He'll charge you $4 for the first visit and $2 for each one after that."

The old fellow soon afterwards walked into the office of the physician named by his friend, and, upon being admitted to the consulting-room, planked down $2, remarking: "Well, Doctor, here I am again."

The physician calmly picked up the money and put it in a drawer, which he locked securely. The sick man looked on expectantly, awaiting the next move.

"Well, I'm ready to be examined," he said, at length.

"I don't think it's necessary," replied the shrewd specialist. "There's no need to do it again. Keep right on taking the same medicine. Good day, sir."

* * *

" 'Putting on dog' is a rather slangy phrase, but it is quite apropos in many cases, especially when used in connection with the airs which persons who have suddenly become rich often try to put on," said Irving S. Kemp, the progressive salesmanager of the Vaughan and Bushnell Manufacturing Company, while entertaining some of his customers at luncheon at the Hardware Club of Chicago, "but sometimes they run against a snag," and then he told the following story:

A new-rich family had adopted the affectation of calling house servants by their last names. An application for employment as chauffeur was received, and the applicant interviewed the woman of the house.

"We call our servants by their last names," she said. "What is your name?"

"You had best call me Thomas, ma'am," replied the applicant.

"No, we insist that you be willing to be called by your last name. Otherwise you won't do at all."

The chauffeur said that he was willing to be called by his last name, but didn't think the family would like to use it.

"What is your last name, then?" said his prospective employer, somewhat coldly, as though she expected a revelation of international scandal.

"Darling, ma'am. Thomas Darling."

* * *

My good friend J. B. Borden, Vice-president of the Borden Stove Company, writes me from the "City of Brotherly Love," where he lives, that Philadelphia is just as comfortable during hot weather as any other place that he knows of.

Incidentally, he told me of a good joke on John R. McKnight, the "live wire" Secretary of the Keystone Association of Eastern Pennsylvania Stove Manufacturers:

"John R. was driving one day through a village when he saw a man amusing a crowd with the antics of his trick dog. He was quite interested and asked the man:

"My dear man, how do you manage to train your dog that way? I can't teach mine a single trick."

The man glanced up with a simple rustic look and replied:

"Well, you see, it's this way. You have got to know more'n the dog, or you can't learn him nothin'."

* * *

Dr. John B. Murphy, recognized as one of the greatest modern surgeons, died a few days ago. That he was not just a great surgeon but was a really "great man" is evidenced from the many beautiful expressions which have come from his friends and associates.

Among these, the following statement by Dr. John F. Golden seems to be the highest praise that can be given to any man—and Dr. Murphy deserved it:

"Of his fame there is little to say. His great achievements, his deeds of kindness, though many of them unrecorded, stand as a monument to his greatness.

"He was generous to a fault. Of all the world was able to give him in riches, fame and satisfaction, he never used one thing for himself, but passed everything out with a generous hand.

"His work ennobled himself, and he ennobled all who came in contact with him. His name was synonymous with relief from suffering.

"Above all, he was a friend—a friend in everything that friendship represents.

"Of the best things that can be said of him is the fact that he considered his discoveries as belonging not to himself but belonging to the whole human family, and he passed them out ungrudgingly for the benefit of mankind."

* * *

If you believe in yourself and love your business, you will get ahead. No earthly power can keep you down. The door of opportunity is wide open for men of superior ability, but it is up to you to qualify for admission.

Chamber of Commerce of United States Calls Business Conditions Good for Fall

In a statement which has been prepared by the Committee on Statistics and Standards of Chamber of Commerce of the United States the prospects for business during the coming fall and winter are reviewed at length, and the general resume of conditions is given in the following sentences:

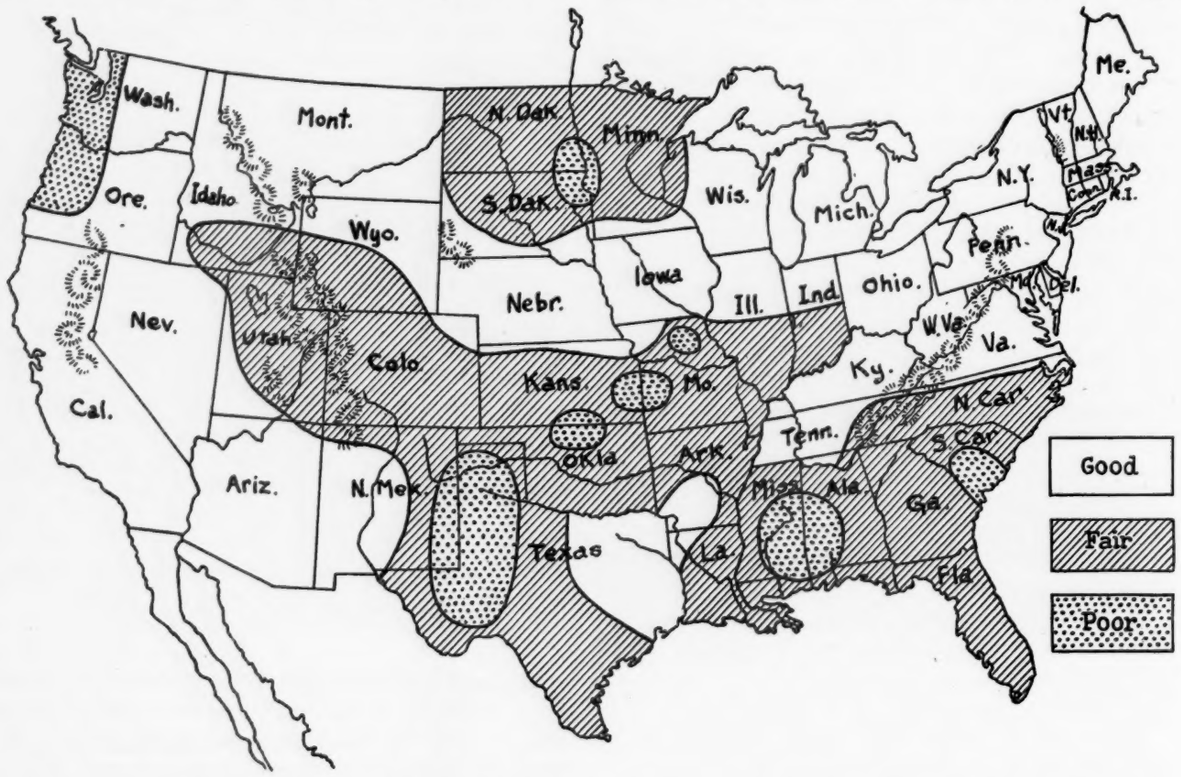
That the production of wheat will be less than the 1915 bumper crop, but only slightly under the ten year average. Manufacturing is reported to be in excellent state practically everywhere, with factories full of orders and the products commanding high prices.

The Committee prepared for the review mentioned in the foregoing a map, a reproduction of which is shown in the accompanying illustration and from which a very clear idea can easily be obtained practically at a moment's glance of the general conditions throughout the United States.

The territory which is indicated by dotted spaces on the map represents a very small proportion of this country in which business conditions for the coming fall and winter can be classed as "Poor." Almost the entire Northern and Western sections are classified as "Good." The Southeast and a section of the middle West is classified as "Fair."

To make up for the shortage in the wheat and cotton crop the farmers in these sections have the high prices on which to fall back. Cattle also brings good prices and hogs and sheep are not only increasing in number but also in the price they bring. Practically everything the farmer has to sell is considerably higher today than it was a year or two ago.

With regard to the industrial condition the committee reports that the only cases in which labor is not fully employed are those where strikes are prevailing and that in practically every line of endeavor wages paid to labor have been considerably advanced during the past couple of years.



Map of United States Showing General Crop and Business Conditions for Fall and Winter of 1916. Prepared by Committee on Statistics and Standards of Chamber of Commerce of the United States.

All in all, the review is full of encouragement—both for the manufacturer and for the retailer of hardware, as well as for others engaged in allied lines, because even in the sections where crops have been poor, in most cases there are offsets which make it possible for the farmers to spend money for many articles which are not to be classed as bare necessities.

The opinion expressed by the Committee on Statistics and Standards with regard to the possibility of interference with business by the presidential campaign is that there is little danger of that, and that in fact, conditions this fall are of such a nature that even the most conservative business man should have no hesitation to prepare for a reasonably good business.

UP TO THE MINUTE NEWS SIFTINGS

The Haynes Stellite Company, Kokomo, Indiana, will build a one story factory, 60x120 feet. James C. Patton, formerly General Manager of the Globe Stove and Range Company, also in Kokomo, is the manager.

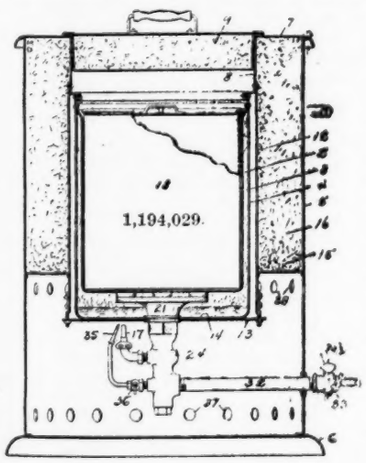
CUSTOMERS HELP BOOST SALES OF OIL STOVES.

In the August number of "Hackley's Store News," published by E. Hackley, Earl Park, Indiana, there appeared a little "reading notice" which gives a good idea of the way Mr. Hackley gets the confidence and goodwill of his customers. The text of the item is given herewith:

"The following people have purchased Clark Jewel Oil Cook Stoves of us recently: Mrs. John Sones, Mrs. William Pence, Mrs. William Wallace, Mrs. Joseph Yost, Mrs. Charles Anstett, John Fleger, Ben Pittser. You will note that some of the names mentioned purchased oil cook stoves of another make last season. Now they are the best boosters we have for Clark Jewels."

SECURES PATENT FOR COOKER.

Arthur J. Kercher, Berkeley, California, assignor to Berkeley Electric Cooker Company, Berkeley, California, has been granted United States patent rights, under number 1,194,029, for a cooker described herewith: A cooker comprising a shell, a cooking receptacle comprising an annular closed chamber arranged within said shell and spaced apart therefrom, a metallic cylinder surrounding said receptacle and supported within said shell, a plate secured to the lower end of said cylinder and bearing against the bottom of said receptacle, and means for heating said receptacle.

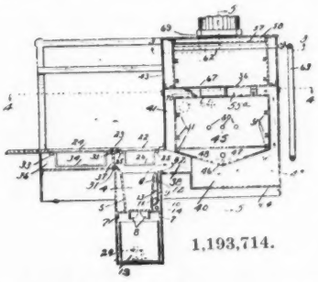


NEW CATALOG OF STOVES AND RANGES FOR GAS AND COAL.

Dealers in stoves and ranges will no doubt find it to their benefit to secure a copy of the new Catalog Number 27 of Good Luck Stoves and Ranges for gas and coal, which has just come off the press. The catalog is very attractively arranged with a handsome cover design, and shows and describes to advantage the extensive line of stoves and ranges manufactured by the Company; well executed electrotypes of these stoves and ranges are furnished to customers free of charge, for use in newspaper advertising, or on billheads, letterheads, envelopes or business cards. Copies of this catalog can be secured upon request, from the Stove and Range Company of Pittsburgh, Preble Avenue and Superior Street, Pittsburgh.

PATENTS COMBINED GAS AND COAL RANGE.

Mortimer L. Packer, Columbus, Ohio, has been granted United States patent rights, under number 1,193,714, for a combined gas and coal range described in the following: A combined gas and coal range comprising a solid fuel heating means, a gas heating means, an oven arranged in superposed relation and laterally disposed with respect to said first named means, a casing surrounding said oven to form a space for the circulation of the heat products from said solid fuel means, an outlet flue pipe communicating with the space formed by said casing adjacent the top of said oven, a damping structure operable when in one position to allow the heat products to pass into said pipe by a passage up one side of said oven and when in the other position, up the other side of said oven, and a baffle plate on the top of said oven extending forwardly from the rear thereof between the flue outlet opening and the last named passageway to force the products toward the front of the top of said oven.



GREAT MINDS THINK LITTLE OF THEMSELVES.

True importance is always simple. The large duties, cares and responsibilities of those seeking to do great things give them natural dignity and ease. They have the simple grace of the burden-bearers of India, who carry heavy loads on their heads, and in the carrying learn how to carry them, erect—with fearless step. There is in them no trace of the pose, of the strenuous. Men of serious effort think too much of their work to think much of themselves. Their great interest, enthusiasm and absorption in their world of fine accomplishment eclipse all littleness. They are living their life—not playing a part. They are burning incense at the shrine of a great purpose—not to their own vanity. They ever have poise—not pose.—William G. Jordan.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Dealer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 46 to 51 inclusive.

The Bullard Hardware Company, which conducts a retail hardware store at 448 North Parkside Avenue, Austin, Chicago, has opened a downtown office for the sale of Builders' Hardware at Room 404, 108 North Dearborn Street. A. F. Brett, for many years with the Orr and Lockett Hardware Company, is in charge.

According to notice by Charles E. White, Niles, Michigan, Trustee in Bankruptcy for the Western District of Michigan, the retail hardware and furniture stock of Warren and Company, Niles, Michigan, together with fixtures and accounts receivable, amounting to $4,110.28, will be offered at public sale in the store of the bankrupt in Niles, on Wednesday, August 23rd, at 9 A. M. Copies of the inventory and appraisement may be examined at the office of Willard J. Banyon, St. Joseph, Michigan, Referee in Bankruptcy.

PROFESSOR PAYNE WILL SPEAK AT HARDWARE CLUB OF CHICAGO TUESDAY, AUGUST 22.

A special treat is in store for the members of the Hardware Club of Chicago, for at the Luncheon August 22nd they will be addressed by Professor Arthur F. Payne, of the Bradley Polytechnic Institute, Peoria, Illinois, who will speak on "Vocational Education a Vital Factor in Our Continued Progress."

Members are urged to be on hand promptly at 12:30 P. M.

With the address of Professor Payne, the Hardware Club will open its fall and winter program of special Tuesday Luncheons with interesting speakers on important topics.

BOUQUET-BROWNSON COMPANY NEW NAME OF OLD ST. PAUL ORGANIZATION OF MANUFACTURERS' AGENTS.

The corporate name of the business hitherto carried on as manufacturers' agents in St. Paul, Minnesota, under the title of the Saunders-Brownson Company, has been changed to that of the Bouquet-Brownson Company, and the capital stock has been increased from $10,000 to $50,000. The change in name does not indicate any change in the personnel of the Company as it has been for the past two years. R. Brownson, Sr., is President; R. Brownson, Jr., Vice-president, and Edward Bouquet, Secretary-treasurer. The Company carries in stock for the convenience of the hardware jobbing trade large quantities of aluminum ware and other hardware specialties.

F. A. BADER SALESMANAGER FOR BRIGHT STAR BATTERY COMPANY.

F. A. Bader, one of the best known men in the electrical novelty and battery business, has been appointed salesmanager for the Bright Star Battery Company of New York City, which also has branches in Chicago and San Francisco. Mr. Bader is one of the pioneers in this line and has had a very rapid growth in this industry, which today is one of the important ones in the hardware and allied trades.

FOREIGN TRADE OPPORTUNITIES ARE PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attaches has received information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

Enameled ware, glassware, etc., Number 22066.—An American consular officer in Africa writes that a firm in his district is in the market for enameled kitchen ware and plates, a cheap line of glass tumblers, and lamps and lamp chimneys. Cable address should be given.

Tools, cooking utensils, wire, steel, waterproof cloth, rubber shoes, etc., Number 22082.—An American consular officer in Spain reports that a business man in his district desires to represent American manufacturers and exporters of industrial machinery of all kinds, as well as accessories and tools; steel, iron, and metals in bars, sheets, wire, and waste metal material; iron utensils for kitchen and household use; waterproof cloth in the piece and waterproof garments; rubber shoes and heels; and woven goods of all kinds, including gloves. Correspondence may be in English. The man proposes to travel throughout Spain, Morocco, and Portugal. References.

Tin plate, iron, cement, etc., Number 22086.—A business man in Brazil informs an American consular officer that he wishes to form commercial relations with American manufacturers and exporters of iron, ironware, Portland cement, tin plate, zinc ware, etc. He desires sole agencies. Correspondence may be in English, preferably in Spanish. References.

Oil stoves, Number 22097.—A business man in Canada informs an American consular officer that he wishes to correspond with manufacturers of oil stoves.

Vacuum cleaners, Number 22098.—An American consular officer in Spain forwards the name and address of a business woman in his district who would like to purchase vacuum cleaners. Reference.

Hardware, clothing, glassware, etc., Number 22094.—An American consular officer in Canada reports that an exporting and importing firm in his district wishes to secure selling agencies from American manufacturers and exporters of clothing, silver-plated and glass ware, canes, umbrellas, cordage, hardware, etc. References.

If your store has a system, live up to the system. You may think the system is of no account, but that is not up to you. The boss decides what is best for his business, and he expects you to conform to it. When you slip a cog, either through carelessness or indifference, you weaken the system just that much.

Well Arranged Window Displays Increase Sales for Retail Hardware Stores

By WILLIAM T. GORMLEY, of Bullard and Gormley Company, Chicago, Illinois.

I notice in the August 12th issue of AMERICAN ARTISAN AND HARDWARE RECORD that another Window Display Competition is to be conducted by that progressive publication.

William T. Gormley.

These Window Display Competitions which have been a regular feature of the policy of AMERICAN ARTISAN AND HARDWARE RECORD for many years have without question had much to do with the progress in the art of arranging attractive window displays of hardware and kindred lines, and as I have acted as a judge in some of these Window Display Competitions I have had an opportunity to notice the great improvement which has taken place in this regard during the past fifteen or twenty years.

Attractive window displays, to my mind, are one of the least expensive and most effective means of attracting trade that are at the retail hardware dealer's disposal.

While I am a thorough believer in the efficacy of newspaper advertising and other forms of the printed word, the show window of a retail hardware store is without question of equally great importance, and if the proper use is made of these show windows many dollars of extra sales and profits will be counted by the owner of the store.

The wise retail hardware dealer will always couple his window displays with his advertising. Whenever in the newspapers or circulars he makes special offers of or calls special attention to certain items or lines of merchandise he will arrange or have arranged in his show windows displays of such items or lines, and these will serve to remind the passer-by of the half-formed decision to buy some particular article to which his attention had been called by reading the advertisement.

In planning his window displays the retail hardware dealer will also use to good advantage the many high class show cards and posters which the manufacturers of trademarked lines are always glad to furnish for such purposes and by making use of these posters and show cards in his window displays he "couples up" with the national or local advertising which these manufacturers may be doing at the particular time, and thus is able to "cash in" on this advertising in much greater measure than if he failed to do his share of the work.

Let me say in this connection that it has been the experience of the most successful retail hardware dealers who have come to my attention that they have found it advantageous to make a special feature of the fact that they carry in stock and feature well-known nationally advertised trademarked lines: They have emphasized this fact not only in their newspaper and circular advertising but also in their window displays, with the result that their business and profits have been largely increased.

This point is worthy of special consideration, that the effective window display does not of necessity mean a large outlay of money and expenditure of time for its installation. In fact, if memory serves me right the window display which won first prize in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition which came to a close on December 15, 1915, was a very simple one and had a very small quantity of merchandise displayed. Its appeal was primarily through its simpleness and good taste.

For some occasions window displays may to advantage contain large quantities of merchandise, but generally speaking, my advice would be to limit the number of different articles displayed in one window, even though there may be a large number of each one. For instance, if the subject of the window display is kitchen utensils it does not follow by any means that every article contained in stock that comes under the head of kitchen utensils should be displayed. But the choice should be made in such a manner as to give the onlooker the impression that the particular store carries a well-selected stock of kitchen utensils and that the prospective customer may here find what may be needed or desired—and at a reasonable price.

The only way in which this last named point can be assured is by making use of show cards and price tickets on each item, or on each group of the same items.

It is a well recognized principle in merchandising that unless you quote a price—a definite one—you will never complete a sale, and the retail hardware dealer may well take a lesson from the experience of the successful department stores who make their high priced street frontage pay them big returns by inducing passers-by to enter and make purchases, through the medium of their excellently arranged window displays of which—let it be remembered—show cards and price tickets are always important features.

Wm T. Gormley

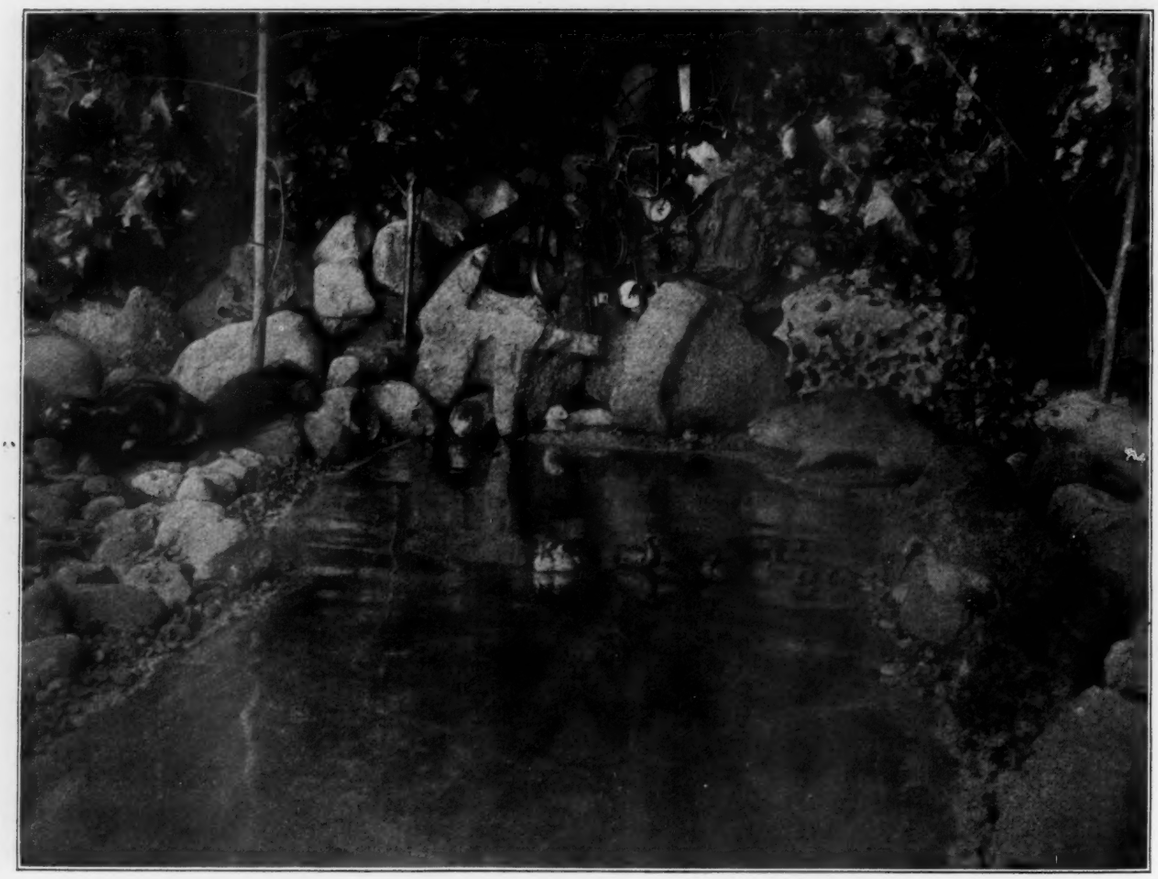
Chicago, August 15, 1916.

Advertising is a peddler who brings the wares of the world into the house each day and tells you how cheap and good they are. But it is more desirable than peddlers, because when you are tired of a peddler you can't fold him up and put him on the pantry shelves.

EXHIBITS IN AMERICAN ARTISAN WINDOW DISPLAY CONTEST

REALISTIC WINDOW DISPLAY OF STEEL TRAPS.

A very realistic window display of Steel Traps, which was awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, is shown in the accompanying illustration. It was arranged by A. J. Hoffman, Murray, Iowa.



Window Display of Steel Traps Awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. Arranged by A. J. Hoffman, Murray, Iowa.

In constructing this window display, a few pieces of crating or old boards were first fastened to the back of the window and then oak branches were nailed to these and the open spaces filled in with smaller branches and twigs, until a solid background of oak foliage was obtained. Then a section of a pond was represented on the floor by means of a highly polished sheet of zinc, whose glistening, mirror-like surface produced a very realistic effect. On the edges of the "pond," sand and small pebbles were placed to resemble natural conditions and next to these were placed various sized rocks and boulders. Amongst these rocks and boulders stood several "trees" made of large oak branches securely fastened to small blocks of wood to make them stand erect.

Next, touches of animal life were imparted to the scene by having several decoy ducks "swimming" in the pond and placing mounted specimens of water fowl, beavers, muskrats, chipmunks, weasels, etc., in realistic positions on the rocks and on the sand. The window display was completed by placing various styles of steel traps on the rocky shores, and although no cards, pictures or other advertising material was used, the onlooker was able to determine at a glance the subject of the window display, while the beautiful, natural setting placed him in a receptive mood for appreciating the possibilities of trapping, with the result that it no doubt proved highly effective. There is no question, however, that show cards and price tickets would have added to its sales value.

Isaac Newton spent many years laboriously writing a book—the wisest book of his generation—only to find it burned to a cinder one day when he entered his study. Did he say, "What's the use? I'm done."? Not Newton. He made a new start along the same lines. He wrote the entire book over again. And now that his name is immortal it doesn't matter how much discouragement or wasted effort preceded his victory.

WINDOW DISPLAY OF LIGHTING APPLIANCES.

In the illustration herewith is shown a fine window display of Lighting Appliances that received Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. It was arranged by G. C. Franklin for the L. P. Smith Company, 13 South First Street, Fulton, New York.

The purpose of this window display was clearly impressed upon the onlooker by the large placard on the background reading "It grows dark early. Let us fit you out with light." Then the plan was developed by grouping in a symmetrical, attractive manner, various lighting appliances, such as table lamps, cold and hot blast lanterns, vehicle lamps, gas mantles, electric lamps, flashlights and electric batteries.

Window Display of Lighting Appliances Awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. Arranged by G. C. Franklin for the L. P. Smith Company, Fulton, New York.

Pink and white were the colors used in the window display, the floor and background being covered with pink cloth, and a four inch band of white cloth bordering the background. The placard in the rear was attractively illuminated by the tables lamps to the sides, supported on a glass top by four hot blast lanterns. Such a variety of lighting appliances as shown in this window display was quite unusual and proved to be one of the factors in its effectiveness.

The chief reason, however, for the successful results of this window display, according to the owners, is that it served to let the people in the community know that the store handled such merchandise. Nowadays it isn't enough for the dealer to carry certain articles in stock—he must acquaint the people with the fact that he sells them, and it is in this way that he gains new customers and increases his sales.

AMERICAN ARTISAN AND HARDWARE RECORD ANNOUNCES ANOTHER WINDOW DISPLAY COMPETITION FOR HARDWARE DEALERS AND EMPLOYES.

The character and general appearance of the display window is the outward and most eminent evidence of the store within. A carelessly arranged window display creates the impression that the store also is run on a careless basis, and therefore the passer-by, attraction of whom should be the function of every window display, is, if not actually repelled, at least not favorably impressed with the store.

On the other hand, a good window display is almost inestimable in value. Silently it does its work each day making an impression on those passing by, until finally it succeeds in persuading inspection of the goods within the store.

In this connection, however, a factor of great importance looms up, one upon which too much stress cannot be laid, namely, the changing of the window display. As a rule, the prospect gains all the information which he or she may desire from one or two inspections of the display and after that it is valueless as an appealing or selling force. Especially is this true in the case of those who pass by the store day by day, and when the same display remains on duty for any length of time they quickly become so accustomed to it that they fail entirely to notice its

very existence, just as the telegraph post which is passed daily and never noticed. It becomes a part of the regular order of things, and the senses are accordingly calloused just as they are to all other objects with which they come in constant touch.

How quickly does one, however, note any change—be it ever so slight—from the regular order of things. Any alteration immediately commands attention, and when this attention is directed toward the hardware window display the dealer's object has been reached, and further interest depends, as previously mentioned, on the character of the display itself.

In view of these facts it therefore becomes desirable to change the window display regularly and frequently, just as the advertisement in the newspapers is changed, and this should be done at least once each week.

In this way the passer-by will not only be attracted by the frequent changes but a larger variety of goods will be brought to his notice as well.

Little difficulty should be experienced in making such a change every week, as the retail hardware store affords an abundant variety of articles almost any of which alone or in connection with other articles make possible a very attractive display. The time and effort expended in this connection will be found to be amply repaid for, not only in the sales directly resulting but from the increased prestige of the store as well.

American Artisan and Hardware Record has always believed in and expounded the value of window displays, and believing that an improvement of conditions in this field would be of great benefit to the hardware trade has for years been actively engaged in the work of helping retail hardware dealers in every way possible to secure the best results obtainable from their window displays.

To accomplish this American Artisan and Hardware Record has for many years conducted window display competitions and has every week published photographs together with descriptions of the displays submitted, so as to furnish hardware dealers with different ideas which they might apply to their own conditions.

Not only do those who enter this competition receive these most valuable helps, but as a further stimulus they have an opportunity to win one of the liberal cash prizes offered for the best window displays of hardware, sporting goods, stoves, ranges, cutlery, house furnishing goods, silver plate, tools, automobile supplies, or any line of merchandise sold in hardware stores.

This competition, which will close December 15, 1916, will be conducted under the same conditions as those obtaining in previous competitions, and cash prizes amounting to $100 will be divided among the winners.

In the following are given the details of the award of prizes and the conditions of the competitions which must be adhered to. Read these carefully and make up your mind to be one of the first to enter, remembering also that you can enter as many window displays as you desire:

Award of Prizes.

The prizes will be awarded as follows:

First prize, $50 in cash, for the best photograph and description received of window display of hardware and kindred lines.

Second prize, $25 in cash, for the photograph and description second in excellence.

Third prize, $15 in cash, for the photograph and description third in excellence.

Fourth prize, $10 in cash, for the photograph and description fourth in excellence.

Conditions of Competition.

The conditions of the competition are as follows:

The photographs must be accompanied by descriptions of how the window displays were arranged and the materials used. These photographs and descriptions may be sent by mail or express, charges prepaid, and must reach this office not later than December 15, 1916. Address all photographs and descriptions to American Artisan and Hardware Record Window Display Competition, 910 South Michigan Avenue, Chicago, Illinois.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be put upon a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants are permitted to enter as many photographs of displays as they please.

A Competition Committee of three will be appointed; one of them will be an expert window dresser and one an experienced hardware man. This Committee will pass upon the merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the Competition.

American Artisan and Hardware Record reserves the right to publish all photographs and descriptions submitted.

SCREW PRODUCTS FOUND RELIABLE AFTER YEARS OF SERVICE.

Having been used by manufacturers for years and found thoroughly reliable, Corbin Screw Products are said to enjoy a greater demand today than ever before. This satisfaction is attributed by the manufacturers to the high quality of the materials and the excellent workmanship combining to produce articles that render lasting service. They further affirm that this quality and workmanship is being scrupulously maintained, so that more and more customers will attest to the merits of Corbin Screw Products. Orders on these, it is said, are promptly executed and quotations can be rendered on wood screws, machine screws; jack, safety and ladder chains; warm air heater chains, stove bolts and rods, escutcheon and hinge pins, and special screws milled from the solid bar. Catalog giving further information will be sent upon request, by the Corbin Screw Corporation, New Britain, Connecticut.

Actions usually speak louder than words. The wasp can't talk but he has a forcible way of expressing himself that renders words superfluous.

Excellent System of Accounts for Retailers Prepared by Federal Trade Commission

As mentioned in previous issues of AMERICAN ARTISAN AND HARDWARE RECORD, the Federal Trade Commission which is headed by an eminently successful business man for many years engaged in the manufacture of hardware specialties, Mr. Edward N. Hurley, has been working out a System of Accounts for Retail Merchants, and this has just been published in pamphlet form.

AMERICAN ARTISAN AND HARDWARE RECORD considers this matter of such great importance to the retail hardware dealers that the contents of this pamphlet are published in the following, with full explanation of the forms which the Federal Trade Commission advises dealers to use.

Great credit is due to the Commission for the care with which this work has been done, and retail hardware dealers whose system of accounts is not well planned or does not give full information at all times as to the condition of their business will do well to make use of the very useful information given in the following:

Introduction.

There is a tendency among retail merchants to conduct their businesses without an adequate system for determining their costs. This condition carries with it various undesirable results. In the first place, the merchant is unable to price his goods intelligently and conduct his business upon sound business principles. In the second place, he is unable, when seeking credit, to produce a correct statement of his financial condition which would enable a banker to extend to him the full credit to which he is entitled. He thereby limits the possible expansion of his business.

There are several forces at work which compel the retail merchant, if successful, to keep books, and the better and more comprehensive his methods the greater chance he has of being successful.

The first of these forces is, of course, competition, which at times compels him to make close prices. The second, and one of vital importance, is the attitude of the banks regarding the granting of credit. Banks are paying more and more attention to the accounting methods used by the merchant to whom they extend credit. They are willing to give larger loans and very often more liberal terms to the merchant who keeps his books in a way that enables him to show the bank at any time just how his business is progressing. A merchant who can show progress will undoubtedly receive more consideration with the same amount of assets than one who cannot. Even if he is successful but cannot show it because of his bookkeeping methods, the bank will not consider him a desirable credit risk.

Another very important point to which the bank gives consideration is whether the prospective borrower is making proper provisions for depreciation on stock, buildings, and fixtures, and his books should be so arranged as to show the amount of these provisions. No merchant can be said to be managing his business properly unless adequate provision is made for depreciation.

The system of accounts outlined in this bulletin has been devised to meet the requirements of retail merchants. The aim has been to devise the least involved system which will give the information essential to successful management. The best system of accounts for any business is one which furnishes the information required with the least effort.

The value derived from an adequate system of accounts is obvious. The greatest value is that of making comparisons and analyzing differences. But before any fruitful comparison can be made between figures of different periods or between figures of different stores, it is absolutely necessary that the systems be uniform. With a uniform system of accounts in use, differences in items reflect differences in conditions, while without a uniform classification, differences in items may reflect only differences in accounting classification.

In order to maintain the simplicity of the system, no departmentalization of the accounts is provided for, but any concern operating distinct departments can readily adjust the system to show the results obtained in each department.

A merchant in order to price his goods properly must know his overhead expenses. With a proper arrangement of his accounts the percentage of overhead may be readily obtained. Goods not priced high enough to cover this percentage are actually sold at a loss. The most convenient way of arriving at the proper percentage to add to the first cost of goods for overhead is to use the average ratio of operating expenses to net sales covering a past period. For instance, if a merchant's annual sales for the last fiscal year were $25,000 and the expense of conducting his business was $5,000, his overhead was 20 per cent. By adding the desired percentage of profit on sales to this overhead percentage, and deducting from 100 gives the percentage of invoice cost to selling price. The invoice cost of an article divided by this percentage gives the selling price.

The rapidity of the turnover is a very important element in conducting a retail business. It is obvious that an increase in turnover goes hand in hand with an increase in profit. A slow turnover may be due to poorly selected stock, to overstocking, or to an inefficient selling organization. No effort should be spared to increase the turnover to its maximum. To ascertain the turnover divide the cost of goods sold during the year by the cost of the average stock carried.

Books of Account and Statements.

To operate the system of accounts here outlined requires but four books of account, namely, journal, general cash book, invoice book, and ledger. Sales tickets and credit tickets are used for recording sales and sales returns.

From these books certain statements, particularly a monthly summary of business, a profit and loss statement, and a balance sheet, should be prepared at definite periods in order to present the results in comprehensive form.

Journal.

The ordinary two-column journal can be used. The opening entry is an inventory of the assets and liabilities.

The totals of the charge sales as shown by the charge tickets should be entered in the Journal, debiting Accounts Receivable, and crediting Sales. The totals of the credit tickets are also entered in the Journal, debiting Sales with returns and Sales Allowances with price concessions and crediting Accounts Receivable.

Transactions which do not go through either the Cash Book or Invoice Book should also be journalized. These entries comprise such items as notes receivable and payable, allowances or corrections of purchase invoices after entry in the Invoice Book, the various adjusting entries at the end of the month, and the closing entries at the end of the fiscal period.

Journal entries affecting trade customers' and trade creditors' accounts will also have to be posted, respectively, to Accounts Receivable account and Accounts Payable account.

General Cash Book.

This book is for recording all cash transactions. The left hand, or debit, side is for recording receipts, and columns should be headed as follows, in the order named: Date, Name of Account, Description, Ledger Folio or LF, Collections on Accounts Receivable, Cash Sales, and General Accounts. The right hand, or credit, side is for recording payments, and these columns should be headed: Date, Name of Account, Description, Check Number, Ledger Folio or LF, Discount on Purchases, Payments on Accounts Payable, and General Accounts.

The total cash receipts of each day should be deposited daily in bank and all payments should be made by check. The total of cash sales for the month should be checked against the total of cash sales tickets, and is then posted to the credit of "Sales," that of the "Collections on Accounts Receivable" to the credit of "Accounts Receivable account," and that of "Payments on Accounts Payable" to the debit of "Accounts Payable account." The total of the Discount on Purchases column is also posted to the debit of Accounts Payable.

All payments for expense items other than petty cash should be entered on the cash book as made and posted therefrom to the proper accounts. At the end of the month all expense bills for the month should be paid, so as to insure the expense being charged in the proper month.

Petty cash disbursements, such as car tickets, telegrams, and such minor items for which it is not expedient to draw checks, should be handled as follows:

A check should be drawn for an amount sufficient to cover petty disbursements for a definite period. At the end of the period the cashier should prepare his petty cash statement, which should be supported by vouchers, and a check drawn for the exact amount of the statement, thereby restoring the petty cash fund to the original amount. This check should be entered in the cash book in the regular way, charging the various expense accounts as shown by the petty cash statement.

The balance of the general cash book at all times should check with the balance as shown by the check book plus the amount advanced for petty cash.

In the check book keep checks and deposits footed separately. When the bank book is balanced, check up the bank list, then rearrange the checks in numerical order, and check with the stubs. If any checks are outstanding, note them on the stub and deduct from total of checks drawn; the check book balance will then agree with the bank book balance.

Invoice Book.

This book contains the record of the invoices or purchases of merchandise only and should carry the following headings: Date of Entry, Date of Invoice, Number of Invoice, From Whom Purchased, Address, Ledger Folio or LF, and Amount of Invoice.

The postings are made direct from this book into the Purchase Ledger and the total at the end of the month carried to the debit of Merchandise Purchases and to the credit of Accounts Payable.

Where the business is departmentalized a more elaborate form of Invoice Book should be used, giving departmental subdivisions of purchases.

Sales and Credit Tickets.

The use of sales and credit tickets for recording sales and sales returns has become almost universal.

A sales ticket must be made out for every sale and the daily total of these gives the sales for the day. The cash sales tickets are checked against the cash received and the charge tickets to go to the bookkeeper. Credit tickets must be made out for credits to customers and these likewise go to the bookkeeper.

Ledger.

The accounts in the ledger should be arranged in the following order:

1. General accounts,
2. Accounts with trade creditors,
3. Accounts with trade debtors,

allotting to each class such space in the ledger as may be necessary.

The general accounts should be arranged in logical order. (See arrangement of accounts.)

Accounts with trade creditors and with trade debtors should be arranged alphabetically, using preferably a loose leaf ledger.

Where the volume of business permits, it is advisable to use three ledgers, a general ledger, a purchase ledger, and a sales ledger, keeping controlling accounts of the purchase ledger and the sales ledger in the general ledger.

Where only one ledger is used it should be divided into three sections corresponding with the above.

The balance of the purchase ledger and of the sales ledger, or of these sections of the ledger if only one book is used, must agree with the balances of the Accounts Payable account and of the Accounts Receivable account. The advantage of these controlling accounts is that the aggregate of accounts payable and of accounts receivable can be had at any time without listing the balances of the individual accounts.

Customers are charged with goods purchased direct from the charge tickets. These tickets are first listed, then turned over to the bookkeeper, who posts them to the debit of the proper accounts, listing the amounts as he posts, then comparing his total with that of the first list, which must agree. Credit entries for allowances, reductions, cash discounts, or returned goods, are made from credit tickets in exactly the same manner.

Posting to the ledger, therefore, must come from one of four sources—the cash book, the journal, the invoice book, or the sales and credit tickets.

Monthly Summary of Business.

This record, Form A, will be found very useful for monthly and yearly comparisons of expenses and ratios. It is arranged with columns for sales, both cash and credit and total, and for the various expenses of the business. The figures on this statement are taken from the ledger.

Each month the figures for that month should be added to the previous total so that the record will give the totals from the first of the year to date as well as the monthly totals.

Profit and Loss Statement.

The amounts for making up this statement, Form B, can be had from the ledger and from the trial balance. It is made up at such times as the inventory is taken. A physical inventory should be taken at least once a year. The basis should be cost with conservative deduction for obsolete and shelf-worn goods. The inventory at the beginning of the period is, of course, that brought down from the end of the last period.

When monthly profit and loss statements are desired, and where the percentage of overhead and profit is known, the approximate cost of the goods sold can be arrived at in the following manner: Deduct the percentage of overhead and profit from 100 and multiply by the amount of the net sales; the result will be the cost of the goods sold, which, when deducted from net sales will give the approximate gross profit on sales.

If desired, the difference between the values placed on the inventory and the actual cost of same can be shown on the statement. Show the actual cost of inventory and then the deduction under the title "Stock Depreciation," carrying the net forward as illustrated. While this is not necessary it is valuable information and this method is recommended.

The total net profit as shown by the statement is that carried to the credit of the proprietor's account in the ledger.

Balance Sheet.

Ledger accounts should be kept by the double entry principle with all real (asset and liability) accounts, as well as with all nominal (profit and loss) accounts. A Balance Sheet of the same date as the Profit and Loss Statement should be made up from the balances of all real accounts. The ordinary asset and liability accounts and a logical classification thereof are shown by Form C.

Accounts and Their Explanations.

Real Accounts.

1. Cash on Hand and in Bank.—Charge this account with the total receipts of the month and credit it with the total disbursements as shown by the cash book. The balance should agree with the cash book balance.

2. Notes Receivable—Trade Customers.—Charge this account with all notes, time drafts, and acceptances held against others, and credit it with the same when paid or otherwise disposed of. The balance will show the uncollected notes receivable.

3. Accounts Receivable—Trade Customers.—Charge this account with the total of the charge tickets of the month, and credit it with the cash payments by customers (taken from the cash book at the end of the month) and with notes receivable, discounts, returns, and allowances (from the journal and credit slips). Balance of this account must agree with the sum of the balances of trade customers' accounts.

4. Reserve for Bad Debts.—Credit this account with an estimated amount, based on charge sales, sufficient to provide for losses, and charge the account with the balance of personal accounts when hope of collection is abandoned.

5. Prepaid Insurance.—Charge this account with all insurance, fire, burglary, fidelity, plate glass, liability, etc. At the end of each month charge the proper accounts (Nos. 35 and 44) with their proportion, the balance being an asset as "Prepaid Insurance."

6. Accrued Interest Receivable.—Charge this account at the end of the period with all accrued interest (not yet paid) on notes, etc., due from others, crediting "Interest Account." When the interest is received it is credited to "Accrued Interest Receivable."

7. Store Property.—Charge this account with the purchase price of the store property. Do not charge repairs to this account, unless they are in the nature of permanent improvements. A fair amount should be periodically credited to "Reserve for Depreciation."

8. Warehouse Property.—Charge this account with the purchase price of the warehouse property. Do not charge repairs to this account, unless they are in the nature of permanent improvements. A fair amount should be periodically credited to "Reserve for Depreciation."

9. Reserve for Depreciation on Store and Warehouse.—Credit this account with the amount of depreciation on store and warehouse, and charge same to "Rent Income" (No. 44).

10. Store Equipment.—Charge this account with the value of all equipment such as counters, shelving, scales, measures, etc., used in the conduct of the business. A fair amount should be written off periodically for depreciation.

11. Office Equipment.—Charge this account with office furniture, desks, safe, and other office appliances (not included in 34). A fair amount should be written off periodically for depreciation.

12. Delivery Equipment.—Charge this account with the cost of automobiles, wagons, horses, and harness. This account must not be charged with repairs to automobiles and wagons, horseshoeing or anything of this nature. A fair amount should be written off periodically for depreciation.

13. Notes Payable—Trade Creditors.—Credit this account with all notes given to trade creditors or time drafts accepted in their favor and charge the account as the same are paid. Balance of this account shows the amount of notes payable outstanding.

14. Notes Payable—Banks.—Credit this account with all notes given to banks and charge the account as the same are paid.

15. Accounts Payable—Trade Creditors.—Credit this account with merchandise bought on account, the amount being carried to this account monthly from the total of the Invoice Book and charge it with all merchandise returned and reductions (Journal), and payments made and discounts taken (Cash Book). Balance of this account must agree with the sum of the balances of trade creditors' accounts.

16. Accounts Payable—Others.—Credit this account with amounts owing to creditors other than trade creditors.

17. Accrued Interest Payable.—Credit this account at the end of the period with interest accrued (not yet paid) on notes, etc., due others, charging "Interest Account." When the interest is paid it is charged to "Accrued Interest Payable."

18. Accrued Salaries and Wages.—Credit this account with salaries and wages earned and unpaid at the end of each month and charge the proper expense accounts. When payment is made this account is charged and closed out and the balance of the pay roll charged in the regular way.

19. Accrued Taxes.—Credit this account with the taxes due up to the end of each month, charging the proportionate amounts to the accounts in which they belong. When the taxes are paid this account will be charged.

20. Proprietor's Drawing Account.—Charge this account with all withdrawals of cash (not salary). At the end of the period the amount of this account is closed into proprietor's capital account.

21. Mortgages Payable.—When a mortgage is placed upon real estate (or assumed at the time of purchase) this account is credited. When paid it is charged.

26. Salaries and Wages of Buying Force.—Charge this account with part of salary of proprietor, active partner, and manager or buyer and the wages of office force proportionate to the time given to buying. If, for example, the proprietor estimates altogether that he gave one-fourth of his time to buying and three-fourths to selling, then one-fourth should be charged to this account and three-fourths to "Salaries and Wages of Sales Force." Similarly, the estimated number of hours a week given by any member or members of the office force to buying should be charged to this account.

27. Miscellaneous Buying Expense.—Charge this account with the traveling expense of buying trips and other expense incurred in buying (not covered by account 26).

28. Salaries and Wages of Sales Force.—Charge this account with wages and other remunerations of sales persons, order takers, and all others engaged in selling, both as regular and extra force; also with the part of the salary of the proprietor, active partners, or manager, and of the wages of the office force proportionate to the time given to selling.

29. Advertising.—Charge this account with all expenditures for advertising purposes, such as space in newspapers and periodicals, space on street cars and billboards, circulars and postage thereon, advertising novelties, trading stamps, charitable donations, window display, electric signs, etc.

30. Miscellaneous Selling Expense.—Charge this account

	Net Sales.			Buying expense.		Selling expense.			Delivery expense.		General expense.							Total Expense.	Per cent of Net Sales.
	Credit.	Cash.	Total.	Salaries and Wages of Buying Force.	Miscellaneous Buying Expense.	Salaries and Wages of Sales Force.	Advertising.	Miscellaneous Selling Expense.	Salaries and Wages of Delivery Force.	Miscellaneous Delivery Expense.	Management and Office Salaries.	Office Supplies and Expense.	Insurance on Stock and Store Equipment.	Taxes on Stock and Store Equipment.	Losses from Bad Debts.	Miscellaneous General Expense.	Rent.		
Jan.	$3,356.31	$1,301.65	$4,657.96	$25.00	$14.00	$177.33	$30.00	$3.75	$102.67	$8.08	$269.00	$22.03	$1.61	$2.50	$33.56	$26.79	$71.25	$787.57	16.9
Feb.																			
Mar.																			
Apr.																			
May.																			
June.																			
July.																			
Aug.																			
Sept.																			
Oct.																			
Nov.																			
Dec.																			
Total,																			
Per cent of Net Sales.																			

Form A.—For Monthly Summary of Business. Recommended by Federal Trade Commission.

22. Proprietor's Capital Account.—This account represents the proprietor's net capital. At the end of the period the net profit is credited to this account. The amount of his drawing account is then closed into this account. The balance of the account is his net capital at time of closing.

In the event of a partnership each partner's net capital would be shown in his respective account and the net profit (or loss) carried to the credit (or debit) of their accounts in agreed proportions. In the event of a corporation this account represents the amount of the issued capital stock and the profit or loss is carried to "Surplus" account.

Nominal Accounts.

23. Sales.—Credit this account with the total sales of all merchandise, the charged sales being taken from the total of the charge tickets for the month and the cash sales from the "Cash Sales" column in the Cash Book. Returns should be charged at selling price for all merchandise returned by customers whether for cash or credit. The difference in this account will be the net sales which is transferred to the credit of "Trading Account."

24. Sales Allowances.—Charge this account with any allowance given a customer not contemplated when sale was made. Allowances should not be charged to "Sales," but closed at the end of the period into "Trading Account."

25. Merchandise Purchases.—Charge this account with the face of the invoices of merchandise before deducting cash discounts. The account is also charged with freight, expressage, and drayage on merchandise purchased. Credit the account with any returns of merchandise made to manufacturer or wholesaler and with any allowances for defects in goods received from manufacturer or wholesaler. The balance of the account is transferred to the debit of Trading Account.

31. Salaries and Wages of Delivery Force.—Charge this account with regular and part time of employes engaged in delivering and with the part of the wages of other employes, whether on sales force or office force, proportionate to the time given to delivery work.

32. Miscellaneous Delivery Expense.—Charge this account with all stable and garage expense, including all repairs, taxes, licenses, upkeep, and with the depreciation charged on the delivery equipment; also charge this account with payments for express, parcel post, and contract delivery service.

33. Management and Office Salaries.—Charge this account with the salaries of the manager, bookkeepers, office clerks, stenographers, and of other general office help not otherwise charged.

34. Office Supplies and Expense.—Charge this account with purchases of stationery of all sorts, account books and forms (except selling and stock forms), typewriter supplies, printing and postage (except advertising), and depreciation on office equipment.

35. Insurance on Stock and Store Equipment.—Charge this account with all expense of insurance, fire, burglary, fidelity, plate glass, employers' liability, and other. This account is not to be charged with insurance on store or business property.

with the cost of wrapping paper, cartons, twine, salesmen's order books, and all other items of direct selling expense not covered by "Salaries and Wages of Selling Force" and "Advertising."

36. Taxes on Stock and Store Equipment.—Charge this account with taxes on all stock and store equipment. As taxes are not payable in advance, the amount charged this account must be credited to "Accrued Taxes."

37. Losses from Bad Debts.—Charge this account with the amount that has been reserved for bad debts (4).

							Perct.	Perct.
23	Sales				$1,659	96		
24	Less Sales Allowances				2	00		
	Net sales				4,657	96		100.0
	Inventory of merchandise at beginning			$3,451	09			
25	Merchandise Purchases (cost delivered at store)			2,759	67			
				6,210	76			
	Deduct inventory of merchandise at closing	$3,062	17					
	Less Stock Depreciation	153	11	2,909	06			
	Net cost of goods sold					3,301	70	70.9
	Gross profit from trading					1,356	26	29.1
	BUYING EXPENSE.							
26	Salaries and Wages of Buying Force	25	00					
27	Miscellaneous Buying Expense	14	00					
	Total buying expense			39	00		0.8	
	SELLING EXPENSE.							
28	Salaries and Wages of Sales Force	177	33					
29	Advertising	30	00					
30	Miscellaneous Selling Expense	3	75					
	Total selling expense			211	08		4.5	
	DELIVERY EXPENSE.							
31	Salaries and Wages of Delivery Force	102	67					
32	Miscellaneous Delivery Expense	8	08					
	Total delivery expense			110	75		2.4	
	GENERAL EXPENSE.							
33	Management and Office Salaries	269	00					
34	Office Supplies and Expense	22	03					
35	Insurance on Stock and Store Equipment	1	61					
36	Taxes on Stock and Store Equipment	2	50					
37	Losses from Bad Debts	53	56					
38	Miscellaneous General Expense	26	79					
39	Rent	71	25					
	Total general expense			426	74	787	57	9.2 16.9
	Net profit from trading					568	69	12.2
	INCOME FROM OTHER SOURCES.							
42	Interest	17	09					
43	Cash Discounts on Merchandise Purchases	6	55					
44	Rent income (net)	16	52					
45	Miscellaneous Outside Income	2	00			7	98	
	Total net profit					576	67	

Form B.—For Profit and Loss Statement. Recommended by Federal Trade Commission.

38. Miscellaneous General Expense.—Charge this account with heat, light, repairs, depreciation on store equipment, and with any items that can not be charged directly to any of the above particular accounts.

39. Rent.—Charge this account with all rents. If the store is owned, rent should be charged equivalent to the amount it could be rented for to others, crediting "Income from Other Sources;" in the latter event, "Income from Other Sources" should be charged with the taxes, insurance, repairs and depreciation on the store.

	ASSETS.							
	CURRENT ASSETS.							
1	Cash on hand and in bank					$1,611	67	
2	Notes Receivable—Trade Customers					191	84	
3	Accounts Receivable—Trade Customers	$3,518	81					
4	Less Reserve for Bad Debts	33	56					
						3,485	25	
	Inventory of merchandise (at cost)					2,909	06	
5	Prepaid Insurance					100	14	
6	Accrued Interest Receivable						71	
	Total current assets							$8,298 67
	FIXED ASSETS.							
7	Store Property	4,500	00					
8	Warehouse Property	1,975	00					
		6,475	00					
9	Less Reserve for Depreciation on Store and Warehouse	26	98					
						6,448	02	
10	Store Equipment					272	71	
11	Office Equipment					74	37	
12	Delivery Equipment					396	67	
	Total fixed assets							7,191 77
	Total assets							15,490 44
	LIABILITIES AND CAPITAL.							
	CURRENT LIABILITIES.							
13	Notes Payable—Trade Creditors	1,210	50					
14	Notes Payable—Banks	900	00					
15	Accounts Payable—Trade Creditors	3,685	72					
16	Accounts Payable—Others	485	00					
17	Accrued Interest Payable	19	23					
18	Accrued Salaries and Wages	82	00					
19	Accrued Taxes	7	75					
	Total current liabilities					6,390	20	
21	Mortgages Payable (warehouse)					1,250	00	
	Total liabilities					7,640	20	
22	Proprietor's Capital Account					7,850	24	
	Total liabilities and capital							15,490 44

Form C.—For Balance Sheet. Recommended by Federal Trade Commission.

40. Trading Account.—This account shows the inventory of merchandise at opening and is not touched again until the books are closed. It is then charged with Merchandise Purchases (25), and Sales Allowances (24), and credited with Sales (23). The inventory at closing is then credited and the balance will show the gross profit on trading. The gross profit is transferred to the credit of the "Profit and Loss Account." The inventory is then brought down as a new balance.

41. Profit and Loss Account (from Trading Operations).—Charge this account with the balances of all the expense accounts, and credit it with the gross profit from trading; the difference will be the net profit or loss, which is closed into the proprietor's account; if a partnership, to the partners' accounts, according to their several interests, and, if a corporation, to the surplus account.

42. Interest.—Charge this account with all interest paid and credit it with all interest received and close into "Profit and Loss Account."

43. Cash Discount on Merchandise Purchases.—Credit this account with all cash discount taken on purchases of merchandise. The account is closed into Profit and Loss.

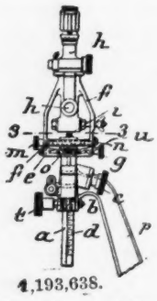
A record of such discounts available but not taken—cash discounts lost—will be found of use.

44. Rent Income (Net).—If the store is owned, the rent which has been charged to account 39 should be credited to this account and it should be charged with insurance, taxes, depreciation, and repairs on store. The account is closed into "Profit and Loss."

45. Miscellaneous Outside Income.—Credit this account with incidental receipts such as toll from telephone pay stations in store, etc.

SECURES PATENT FOR GUNSIGHT.

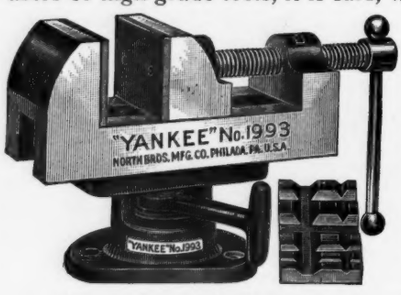
Karl Voeller, Duesseldorf, Germany, assignor to Rheinische Metall-Waaren und Maschinenfabrick, Duesseldorf-Devendorf, Germany, has obtained United States patent rights for a gunsight, under number 1,193,638, described herewith: A sighting device for guns comprising a support, a sleeve carried by said support, a sight bar mounted in said sleeve, said sleeve and sight bar being capable of being turned on said support about an axis parallel to the axis of the gun barrel, a sight, a carrier therefor mounted on the sight bar, and means connecting said carrier and said bar permitting the turning of said carrier about an axis parallel to the line of sight, and a spirit level mounted on said carrier at right angles to the latter axis.



1,193,638.

FEATURE IN VISES THAT WILL BE QUICKLY APPRECIATED.

Tool makers, machinists, electricians and all other users of high grade tools, it is said, will quickly appreciate the feature of a vise with a detachable swivel base, such as is shown in the accompanying illustration. This is the Yankee Vise, Number 1993, which, according to the manufacturers, can be easily and quickly detached from the swivel base by the turn of a set screw, and being accurately machined all over, can be used in any position as a jig for special work in the drill press, shaper and other machines. The swivel base is said to be firmly locked or easily released in any position by a short movement of the lever at the side, and another feature is the special grooved block, also shown herewith, by means of

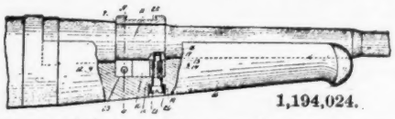


Yankee Vise With Detachable Swivel Base.

which it is said the work can be held rigid at any angle. The Yankee Vise with detachable swivel base can be obtained from jobbers and further details of its construction, price list, etc., will be sent upon request by the North Brothers Manufacturing Company, Philadelphia, Pennsylvania.

FIREARM PATENTED.

Thomas C. Johnson, New Haven, Connecticut, assignor to the Winchester Repeating Arms Company, New Haven, Connecticut, has obtained United States patent rights, under number 1,194,024 for a firearm described herewith: In a firearm, the combination with the barrel thereof, of a forearm, a forearm lock consisting of a yielding sleeve adapted to be applied to the barrel and having a depending split lug, means applied to the lug for clamping the sleeve upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm in place.



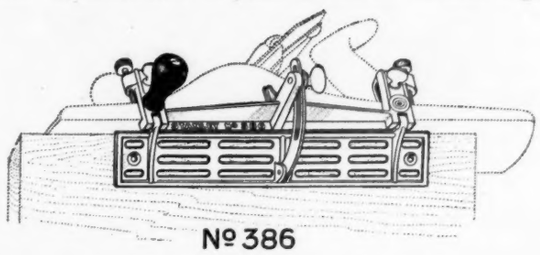
1,194,024.

LYMAN H. O'DONNELL BUYS INTEREST OF PARTNER IN O'DONNELL-BARROWS COMPANY.

Lyman H. O'Donnell has bought the interest of Arthur H. Barrows in the O'Donnell-Barrows Company, Washington, Indiana, which conducts a very large retail business in hardware, lumber and building materials, besides operating a big sheet metal and plumbing shop. Mr. O'Donnell is now sole owner of the business.

JOINTER GAUGE FOR IRON PLANES ENABLES WORKMEN TO PLANE BEVELS OF ALMOST EVERY ANGLE.

Very often it becomes necessary for carpenters and other woodworkers to plane bevels of various angles



Stanley Jointer Gauge for Iron Planes.

or to square up the edges of boards with extreme accuracy, and without some special tool or appliance this cannot be done to any great degree of satisfaction. To facilitate and insure the accuracy of these operations the Stanley Jointer Gauge is made for use with all sizes of iron jack or jointer planes. This tool, with all parts of metal, except the knob, and the joints and bearing surfaces machined, is said to enable the workmen to plane bevels of any angle between 30 and 90 degrees or to accurately square up the edges of boards. The illustration herewith shows how it is attached to a plane, with the wooden knob forming a convenient grip for the hand. Some of the advantages possible with this gauge, according to the manufacturers, are that the knob can be placed at either end; the tool can be attached to either side of the plane, making it equally adaptable for right or left hand work; and a bearing surface longer or wider than the face of the gauge itself can easily be provided. Further information can be obtained from the Stanley Rule and Level Company, New Britain, Connecticut.

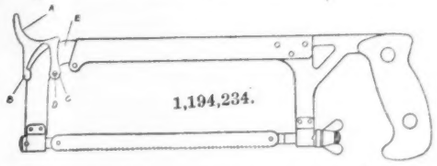
UNIFORMITY AND KEEN CUTTING QUALITIES PROMINENT FEATURES OF FILES.

When it comes to quality and service, naturally a tool that is efficiently constructed of durable materials gives the mechanic the satisfaction that he has reason to expect. This circumstance is said to apply to the Nicholson line of files, which includes the Nicholson Increment Cut files, stated to have been accepted as the standard American file for nearly fifty years, and the Nicholson X. F. Swiss Pattern files, designed to compete with the imported files of precision and which are claimed to be rapidly supplanting the latter in this country owing to their superiority of temper, cut and adaptability. In the entire assortment the high grade of workmanship, the uniformity and the keen cutting qualities are said to enable the Nicholson files to render long, satisfactory survice, so that the benefits derived from their use are self-evident. Full information is contained in the catalog of the Nicholson files and in an instructive little booklet entitled "File Filosophy." This booklet will no doubt be a most valuable help to the dealer and the mechanic because it explains the technicalities of files, defining their terms and setting forth their uses and the proper manner of handling them. The contents are strictly impartial and apply to all files alike. Copies of the catalog and of "File Filosophy" will be sent, free of charge, upon request by the Nicholson File Company, Providence, Rhode Island.

Nicholson File.

PATENTS ATTACHMENT FOR SAW FRAMES.

Alfred M. Remington, Fitchburg, Massachusetts, assignor to the Simonds Manufacturing Company, Fitchburg, Massachusetts, has procured United States



1,194,234.

patent rights, under number 1,194,234, for an attachment for saw frames described in the following: An attachment for saw frames consisting of a forked portion to embrace the frame bar, means to clamp the

forked portion to the frame, a projecting lug to engage the frame in opposition to said clamping means, and a thumb rest extending outward from the attachment.

HAMMERS THAT GAIN SATISFIED CUSTOMERS.

Because of their improved method of construction the Vaughan and Bushnell Nail Hammers, one of which is shown in the accompanying illustration, are said to gain for the dealer satisfied customers in every instance. These hammers are manufactured by the drop forge process, in which the grain of the steel is pounded close; the hammers are made in positive dies

Vaughan and Bushnell Nail Hammer.

and the eyes are forged smaller toward the center than at the ends, so as to act as a lock and hold the handle tight and secure. This process is said to make a uniform forging and from this a hammer of exceptional durability. The face of the hammer, it is stated, is crowning and can be used on the highest finish wood without marring the surface. According to the manufacturers, the claws of the hammers are designed to give the greatest leverage when pulling, with the least effort. The handles are described as being of second growth hickory, securely wedged into the hammer under high pressure and properly proportioned so that they will hang right. Further information can be secured from the Vaughan & Bushnell Manufacturing Company, 2130 Carroll Avenue, Chicago, Illinois.

TIME TO PREPARE FOR FALL SALES OF FIREARMS.

During the Fall the sale of firearms receives an impetus which may naturally be attributed to the open-

Iver Johnson Safety Automatic Revolver with Western Walnut Grip.

ing of the hunting season, and the dealer who plans ahead for his business should be preparing now for the autumn rush. With reference to this situation, the manufacturers of Iver Johnson's firearms state that dealers are assured of prompt deliveries now and they reiterate the statement that their Safety Automatic revolvers and Champion shotguns can be shipped on short notice. This ability to fill rush orders, they state, is due to the fact that they have not taken any war contracts but have devoted all their attention to the regular trade, with the result that dealers can feel confident of securing quick service and sustained quality. The illustration herewith shows one of the favorites for 1916—the Iver Johnson Safety Automatic Revolver with the western walnut grip. This is the regular safety automatic model with a target grip carved from a single piece of Circassian walnut, highly finished. Full details of the Iver Johnson revolvers and shotguns can be secured from the Iver Johnson's Arms and Cycle Works, 402 River Street, Fitchburg, Massachusetts.

MAGAZINE GUN PATENTED.

Under number 1,193,889, United States patent rights have been granted to Joseph E. Gadbois, Springfield, Massachusetts, for a magazine gun described in the following: In a magazine gun, an endless series of cartridge carriers, a magazine, means for moving cartridges from the carriers to the magazine, a firing drum, means for feeding the cartridges to the latter from the magazine, a hammer for firing the cartridges in the drum, an ejector, and a trigger controlling the aforesaid means, hammer and ejector.

SEAMLESS ROASTER WITH MANY ADVANTAGES.

The many advantages possessed by the Oval Oak Seamless Roaster, which is shown in the accompany-

Oval Oak Seamless Roaster.

ing illustration, are said to commend it highly to every housewife who notes its construction. This roaster is described as being large enough for a twelve-pound turkey and durably made of extra heavy smooth black steel sheets in but two pieces, without seams—top and bottom. The top is embossed and makes the roaster self-basting and this, added to the fact that it is easily cleaned, has no enamel to chip off, is easily opened while hot or cold, and sells at a low price, is said to be finding universal favor for this roaster. Dealers are urged to investigate the sample dozen proposition that is now offered, carrying with it a generous supply of advertising matter—colored

hangers, display cards, cuts and circulars, which, the Company says, will help build up a profitable Fall business in this line. Full details can be obtained from the Wheeling Corrugating Company, Wheeling, West Virginia.

VALUABLE BOOK OF INFORMATION ABOUT ALASKA.

A very useful reference book, entitled "Alaska Information," has recently been published, in vest-pocket size, by the C. W. Young Company, Juneau, Alaska, dealers in mining and fishing supplies and contractors in plumbing and sheet metal work. This book contains a great deal of valuable information, such as tables to find weights of round steel and iron; showing thickness of the various gauges of black and galvanized sheets; thickness outside and inside diameters of various sizes of pipes; rules for finding speed of belts on machinery; dry and liquid measures; copies of game, fishing and mining laws of Alaska, etc.

On other pages are given weights of certain squares of sheet metal; rules for expansion and contraction; diameters of valves with their corresponding weights in various thicknesses of iron; hydraulic measures; high and low tide tables; license fees; list of government officials; parcel post rates; timber regulations, etc.

Altogether, this is a very handy and valuable book to have for those who contemplate visiting Alaska, and indeed for those who are living there. Copies will be sent free of charge to any one addressing the C. W. Young Company, Juneau, Alaska.

OBITUARY.

William A. Ludwigs.

William A. Ludwigs, for many years a prominent member of the Chicago Retail Hardware Association, died on Monday, August 14th, at his home, 1850 South Millard Avenue, Chicago, at the age of 56 years. He was President of the W. A. Ludwigs Company and operated a retail hardware store at 1860 Blue Island Avenue. In Masonic circles he was very active, being a member of the Blue Lodge, Chapter, Council, Commandery, and Temple. The funeral was held from his late residence on Thursday, August 17th, and was attended by many of his friends and business associates and acquaintances. His widow and two sons, Arthur and Elmer, are left to mourn the loss of a fond husband and loving father.

Stanley O. Aikens

Stanley O. Aikens, 22 years old, Assistant Traffic Manager at Worcester, Massachusetts, for the American Steel and Wire Company, died August 16th, from infantile paralysis at his home on Winter Street in that city. He was stricken Friday, August 11th.

When you try to sell a customer something that is unsuited to his requirements or which you know he cannot afford, you are not only doing your patron a wrong, but violating one of the cardinal principles upon which successful business is based—that transactions shall be mutually satisfactory, and mutually profitable, the foundation of confidence.

RETAIL HARDWARE DOINGS.

Alabama.

The hardware store of Pittman and Allgood, Camp Hill, was destroyed by fire.

Arkansas.

Tobin Brothers, DeQueen, dealers in hardware, implements and furniture, will erect a new 25x100 foot building.

Illinois.

The W. H. Grimm Hardware Company, Chicago, has been incorporated with a capital stock of $5,000 by Walter H. Grimm, E. F. Joerms and W. M. F. Jacobs.

Iowa.

Ben Dirks, Stout, has purchased the hardware and implement business of Hessenius and Stow.

G. H. Hatfield, Pierson, has purchased the interest of his partner, Charles Whitnell, in their hardware, implement, furniture and harness business.

The two hardware stores conducted by the Seaman-Clark Hardware Company, Albia, have been consolidated. They will carry a line of automobile accessories, implements, etc.

George Schuler, Griswold, dealer in hardware, implements and automobiles, has moved into his new brick building which has just been completed and which is taking the place of one that was destroyed by fire the first of the year.

Powell Brothers, hardware and furniture dealers in Sharpsburg, have been succeeded by Frank Wright.

Kansas.

F. G. Berridge, Selden, has disposed of his hardware and implement business to his brother, E. D. Berridge.

The S. A. Rouse Hardware Company, Maize, has purchased the hardware and implement business of Charles Hansen at Lewis.

A. E. Laird, Tribune, has succeeded Alfred Ellis in the hardware business. He will also carry a line of farm implements, wagons and buggies.

Minnesota.

Henry Warber, Eyota, has sold his hardware store to William Smith.

A. J. McAninch, Redwood Falls, has bought the Laird hardware store.

The Lowry Hardware, Furniture and Machine Company, Lowry, has engaged in business.

Missouri.

C. R. Phillips, Greenwood, has disposed of his hardware, implement and harness store to L. C. Leonard.

Moore and Hurt, Bunceton, have sold their hardware and implement business to Herbert and Joseph Hawkins.

The Jackson Hardware Company, Gower, has taken over the hardware and furniture stock of J. C. Stark.

Montana.

G. C. Anderson and J. H. Huene, Ingomar, have bought the hardware and implement stock and building of the Ingomar Mercantile Company and will continue business under the name of G. C. Anderson and Company.

C. T. Thoralson, Laurel, will open a hardware store.

D. W. Cavanaugh, Antelope, has sold his hardware store to C. M. Island.

Nebraska.

W. D. Dinnis, Lewiston, has engaged in the hardware and implement business.

John Grosswillie, Ruskin, has traded his hardware and implement store to J. C. Bartel for a half section of land.

North Dakota.

T. C. Werner, Dawson, will open a hardware store.

Oklahoma.

H. W. Hutton, Graham, has sold his hardware and implement store to Van Geisen and Collins.

M. O. Foster, Alex, has disposed of his hardware, implement and furniture store to Alex Chitwood.

Texas.

The Southern Supply Company, Uvalde, is erecting a new 80x140 foot building which it will occupy with its hardware and implement business.

H. R. Michelke, Skidmore, has suffered a fire loss in his hardware and lumber store, the damage being $30,000.

Wisconsin.

Benjamin Strong, Manawa, has formed a partnership with his brother Fred in the hardware business.

O. G. Wheeler, Baraboo, has bought the hardware store of Boyd W. Bachly.

T. J. and C. A. Telschow, Marathon, have purchased a hardware and implement business.

The Hoernel Hardware Company, Racine, have sold their High Street store to August Tchlevensky and Harry F. Krupp.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

What every advertiser as a rule seeks is distinction—something or other that will differentiate him from everybody else in his line and give the reader the means of recognizing his advertisements and co-ordinating them with his previous ones. In this particular instance such a move is particularly opportune because, as will be noted, advertisements of this character are run every week by the Pickering Hardware Company, Cincinnati, Ohio, announcing popular prices on certain articles, and always advising the reader to "Save the Difference." No doubt it is the plan to have the top and bottom sections of these advertisements the same every week, so that the reader becomes quickly cognizant of each of the series. As regards the advertisement itself, it is easy to see that it has a simple convenient layout and possesses all the qualifications needed to convert the readers' inclination to purchase into definite action. The advertisement was inserted in the Cincinnati, Ohio, *Times Star*.

ANYTHING IN HARDWARE
PICKERING'S
POPULAR PRICES THIS WEEK
EVERYTHING IN CUTLERY
A Little Better Quality "Save the Difference."
664th WEEKLY SALES
A Little Less Price "Save the Difference."
FOR AUTOMOBILE AND HOUSEHOLD CLEANING
SPONGES
FOR ALL USES
25c Grade 14c
30c Grade. 18c
Tarpon High-Grade Sponges—Housekeepers will find these sponges are excellent for housecleaning purposes. They are very durable, wear well, hold plenty of water. Besides for housecleaning they are fine for washing Carriages, Automobiles and Vehicles of all kinds.
This Week 25c Grade. 14c 30c Grade. 18c 40c Grade. 24c
GENUINE ROCK ISLAND SHEEP WOOL SPONGES. 39c, 49c, 59c, 69c, 79c
10c
Genuine Durham Duplex DEMONSTRATOR RAZOR
—COMPLETE WITH BLADE—
—BY MAIL 5c EXTRA—
10c
Fine Quality—Large Size
Face Cloths 3c Each
Sanitary Face Cloths or Wash Rags—Made of superior soft absorbent yarn; one side smooth; other side rough.
Big value.
This Week Only....3c
Ye Olde English Toilet Soap—Glider Flower scented; 10c size.....7c Ea.
GOOD QUALITY—HEDGE SHEAR.
Hedge Shear—8-inch polished. Good Quality Steel Blade; Varnished Wood Handle.
This Week only.....98c
IN KITCHEN UTENSIL DEPT.
Aluminum Bertin Kettle—6-Quart Size—Has bail handle. Complete with Aluminum Cover.
This week only $1.19
Combination Dipper, Strainer and Funnel—Excellent for straining soup and making jelly; acts as water dipper and pint measure. Fine for filling fruit jars.
This week.....8c
E. Z. Seal Fruit Jars—Preserves the fruit longer; adds to its taste and attractiveness. Price per dozen—
½ Pt. 59c 1-Pt. 63c 1 Qt. 69c 1 Qt. $1.10
See Our Assortment
Bottle Water Coolers
SERVICEABLE GARDEN HOSE THE KIND TO BUY
CHAMPION GARDEN HOSE—Size ¼ and ⅝ in.—While cheap it is not the cheapest hose made. Not warranted, but well worth the price we ask. In Fifty Foot Sections...
½-in size 5c ⅝-in size 6c Ft.
WINNER GARDEN HOSE—A moderate price hose that will surely give satisfaction. Well made. This Hose is 3-ply. In Fifty Foot Sections....
½-in size 8½c ⅝-in size 9½c Ft.
HUMMER HOSE—Has six layers of duck; good tube and cover. Serviceable at a low price.
In Fifty Foot Sections.....
½-in size 10c ⅝-in size 11c Ft.
RUBY GARDEN HOSE—Has five ply; red cover; all the rubber used being of finest quality; can be recommended highly.
In Fifty Foot Sections.....
½-in size 11½c ⅝-in size 13c Ft.
PICKERING GARDEN HOSE—Seven ply, white cover. Made of 7 ply closely woven extra quality duck with seamless pure rubber tubes. Pickering Hose holds its firmness, requires less mending, wears better, lasts longer than many much higher priced hose. In Fifty Foot Sections.....
½-in size 13c ⅝-in. size 14½c Ft.
EAST-WEST HOME IS BEST
SAVE THE DIFFERENCE
PICKERINGS
FIFTH & MAIN STS.
CINCINNATI—MY HAPPY HOME—

* * *

In the accompanying illustration is shown a full page advertisement in the *Minneapolis Journal* of the Warner Hardware Company, Minneapolis, Minnesota. A remarkable statement is made in the introduction—that 49 percent of the Company's business is on Builders' Hardware. Such a large proportion is exceptional, but it shows what can be accomplished if you set your mind on an object.

WARNER HARDWARE CO.
13 SO. 6TH. STREET
Our Sales for Month of May Were Well in Excess of Any Month of Our Existence!
WARNER HARDWARE CO.
13 So. Sixth Street.

Another department which is of considerable prominence is that of Automobile Accessories, a whole column being devoted to advertising a dozen different articles.

It is interesting to note, in this connection, that every item had a short description, a suitable illustration and a definite price. That is the kind of advertising that always brings returns. Incidentally, also, it explains why the Warner Hardware Company and Morison's, the other large retail hardware store in Minneapolis, are known as two of the most successful hardware stores in the United States.

HEATING AND VENTILATING

METHODS OF TESTING WARM AIR HEATERS.

At the recent Summer Meeting of the American Society of Heating and Ventilating Engineers, held at Detroit, Michigan, the following very instructive paper was read by R. W. Davenport, of the Michigan Chapter:

The determination of the characteristics of a warm air heater is attended by difficulties seemingly out of all proportion with the simplicity of the heater itself. Having to deal with relatively large volumes of air, moving at low velocities and under low pressures, introduces a considerable obstacle in itself, since the available methods of measuring air are less accurate at such low pressure heads. A further difficulty, due to the comparatively low heat storage or heat content of the warm air heater, which is of course practically limited to the weight of the metal alone, lies in the wide and rapid variation in temperature and velocity of warm air, making the periodic determination of values unreliable as a basis for assuming total values over longer periods, or interpolation. The necessity for preserving natural conditions of pressure and temperature of the air also complicates the procedure, for to use air at 70 degrees Fahrenheit, or under forced draft, is to entirely vitiate the results.

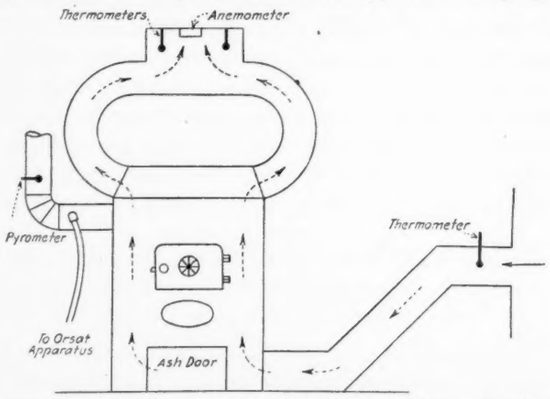


Figure 1—Arrangement of Warm Air Heater Casing Under Test.

Perhaps the first problem encountered in conducting efficiency tests was the question of firing. The "standard" method was found to be impossible owing to the enormous error in "judging" the heat stored at starting and stopping. The alternate method was used with considerable success on long runs of 18 hours or more, but proved unreliable on shorter runs, successive tests failing to check closer than about 8 percent, due to uncertainty as to the state of fuel bed at starting and stopping.

In order to eliminate this uncertainty, a "balance" method was devised and has been used for some time with considerable success. On the principle of the Junkers calorimeter, the warm air heater is charged with known constant quantities of fuel hourly or oftener, and determinations of air temperatures, air velocities and flue temperatures are made at ten minute intervals, until all values are either constant, or, in the case of high combustion rates, show a regular variation with the firing. It is obvious that when this condition is reached, the output, plus the losses, balances the input, and a determination of output and losses is accurate to the limits of the methods of determination. At relatively high combustion rates, the readings eventually show a regular fluctuation with each firing period, when it becomes easy to accurately total the values determined. At moderate combustion rates, however, and with a normal depth of fuel bed, the fluctuation is negligible and successive readings will check closely over long periods.

Air Measurements.

The most difficult problem—that of determining the velocity of the warm air—has not yet had a fully adequate solution. The methods commonly used are: The anemometer, the Pitot tube and inclined manometer, and the Thomas electric meter.

The anemometer is at once the most convenient and the least accurate method. However, when calibrated under working conditions in place, in the manner described by Professor John R. Allen the accuracy is much improved. The Pitot tube and inclined manometer, which are used to check the anemometer, require careful selecting as to proportioning of orifices. Excellent results have been obtained with the American Blower Company's form of tube and gauge. The use of the Thomas meter has been somewhat limited and no data as to its results are now available.

Direct Determination.

The writer has done some experimental work looking toward the direct determination of the heat content of the warm air, which is here described in the hope that it may prove suggestive of further developments along this line. By interposing in the path of the warm air, a large cellular radiator of the type used on automobiles, a considerable proportion of the heat of the air may be transferred to water without causing an excessive pressure drop; in fact, the resistance offered by the radiator is quite comparable with the resistance of the piping and registers in a typical working installation. The temperatures of the air on each side of the "absorber" are best determined by electric resistance thermometers comprising grids of nickel wire, the resistance of which is determined with a Wheatstone bridge. The flow of water through the absorber is adjusted to a constant value—by means of a constant level attachment or otherwise—and the temperature rise noted, preferably on Beckmann thermometers.

From the observed data, the weight of the air is calculated as follows:

If T = temperatures of warm air entering absorber, degrees Fahrenheit;
t = temperatures of warm air leaving absorber, degrees Fahrenheit;
w = temperatures of water entering absorber, degrees Fahrenheit;
W = temperatures of water leaving absorber, degrees Fahrenheit;
L = weight of water leaving absorber in pounds per minute;
A = weight of air in pound per minute,

then

$$0.2375\ A\ (T\text{-}t) = L\ (W\text{-}w) \quad \ldots\ldots (1)$$

$$A = \frac{L\ (W\text{-}w)}{0.2375\ (T\text{-}t)} \quad \ldots\ldots (2)$$

The heat content of the air in B.t.u. per minute, H, may be calculated as follows:

If H = B.t.u. per min., and
E = temperature cold air entering heater, degrees Fahrenheit

then

$$H = 0.2375\ (T\text{-}E)A \quad \ldots\ldots (3)$$

It will be apparent that the accuracy of the method depends upon the accuracy of measurements on the temperature of the warm air. This, however, is considerably greater with nickel grid resistance thermometers than by the use of mercury thermometers for the reason that with a considerable length of nickel wire, average values are obtained throughout the area of air passages automatically. Several factors contribute to the accuracy of the method such as the relatively great temperature drops obtainable which lessen the relative value of the errors of observation on both the water and air. Furthermore, by using the balance firing method the whole apparatus may be maintained in thermal equilibrium for considerable periods with consequent facility of observation.

It is probable that a direct reading differential arrangement of the resistance thermometers would further facilitate observation especially where temperatures vary. It is hoped that other refinements will suggest themselves, and that the method may be developed further.

Once the methods and instruments of testing have been developed to the limit of availability it becomes possible to investigate the thermal characteristics of a heater from several viewpoints. The ratio of heat delivered to heat available in the fuel may be determined under various conditions as to rate of combustion and ratio of grate area to heating surface ("heating surface" being the area of wall surface maintained at a higher temperature than the warm air in contact) and with various lengths of gas travel between fuel bed and pipe collar, such data being of particular value in heater design.

One fact which will at once make itself apparent from a study of the data obtained on such tests, is the profound influence of the rate of combustion on the efficiency. For example, a heater of conventional type was found to deliver to the warm air 78 percent of the B.t.u. content of the coal at a rate of 15 pounds per hour, while the same heater burning 10 pounds per hour delivered 86 percent to the warm air. Another heater of similar type, but very much smaller, showed 64 percent efficiency at 10 pounds per hour and 71 percent at 5 pounds per hour. The reason for this effect probably lies partly in the inherent characteristics of the warm air heater which permit of relatively higher temperature limits of heating surfaces with consequent increase in radiation losses, and partly in the great increased flue losses at the high temperatures, and high excess air content incident to high combustion rates. By "high" rates are meant rates above 5 pounds per square foot of grate per hour. The arrangement of the casing for testing is shown in Figure 1.

An evident corollary of the above fact is that for every size of heaters the preferential combustion rates may be defined within narrow limits, with consequent advantage to all concerned.

At normal and low rates of combustion, the losses in a heater seem to be confined practically to the flue losses. Tests to establish this fact have been made in the following manner: The heater was provided with a 1 inch insulation of asbestos felt secured to the outside of the casing by wires in such a way that it could be very quickly removed. The heater was then "balanced" and was run in equilibrium for an hour, with nearly continuous readings of temperatures and velocities of warm air. The insulation jacket was then quickly dropped, and continuing the firing as before, the readings were carried on for another hour. The difference was within the magnitude of the inherent error—about 1.5 percent. The combustion rate in this test was 4 pounds anthracite per square foot of grate per hour, the net efficiency was 80 percent and the flue gas temperature was 465 degrees Fahrenheit with a proximate analysis as follows: $O_2 = 0.101$; $CO_2 = 0.103$; $CO = 0.002$.

To further investigate the losses via flue gases, tests were made with a doubled length of gas passage in the radiator ("economizer" better describes this portion of the appliance) in comparison with a standard length of gas passage. Two economizers were superposed as shown in Figure 2 and dampers arranged so that the gases could be directed through both in series or through one alone, thus conveniently doubling the gas travel at will. The results obtained with this outfit are listed in the accompanying tabulation.

Test Results of Warm Air Heater Losses When Equipped with Economizers.

	Single economizer.	Double economizer.	Gain percent.
Total heater efficiency	58.8	64.3	5.5
Temp. drop through .....750°-560°=250°		750°-460°=390°	14.0
Pres. drop (in. water)	0.05	0.06	0.01 (loss)
Final temp. waste gases...	560°	460°	17.8

Therefore the losses through high temperature of waste gases were reduced over 5 percent by doubling the length of gas travel, with the requirement of 0.01 inch increased draft pressure. The effect would of course be greater at higher rates and less at lower rates than the 15 pound per hour (total) used on the test.

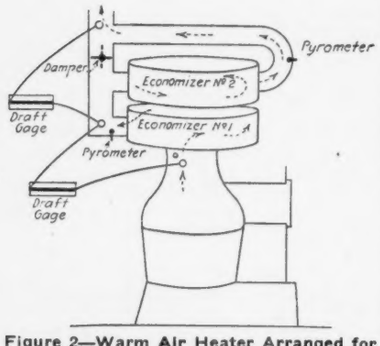


Figure 2—Warm Air Heater Arranged for Determination of Flue Gas Losses.

It will be evident that in all tests on the localization and magnitude of losses, the balance firing method is of great assistance since it practically insures that any change of observed values is due to the change in the arrangement of the apparatus and not to the change in rate of combustion through the burning down of the fuel bed.

It is hoped that further use of the method may be found in such work as the exploration of warm air heater casings for temperature and pressure distribution, in determining transmission coefficients for various surfaces at various velocities and temperature of air, and the relative value of different portions of the heating surface. And in conclusion it is hoped that the difficulties in the path of the investigation of warm air heaters have at least been suggested temptingly enough to arouse the wider interest the question deserves.

PRICE-BEATING COMPETITION HOLDS LITTLE PROFIT FOR DEALER.

The dealer in warm air heaters finds little profit in price-beating competition because when he stacks up against price cutters, he is generally in for some pretty close estimating. Under these conditions it is more than likely that he will have to shave his price right down to the bone if he intends to land the business, for to many people all warm air heaters look more or less alike and price looms up as a mighty important factor. But by selling Kelsey Health Heat, it is claimed that the dealer can keep out of this harmful competition, because the close estimators cannot compete on a similar basis. The Kelsey heating system is said to change the air in every room four times an hour and at the same time keep every room at the same even temperature, no matter which way the wind blows. To help the dealer secure the business in his territory, the Company is ready at all times to send booklets and follow-up letters to prospects, and will gladly give any help the dealer may need with his plans and estimates. Full particulars can be obtained from the Kelsey Heating Company, 301 James Street, Syracuse, New York.

BIG FIELD FOR PIPELESS WARM AIR HEATERS.

The installation of pipeless warm air heating systems is said to open up an extensive, profitable field to the dealer because they are especially adapted for the many houses where one register placed directly over the warm air heater will furnish sufficient heat for all parts of the house. Owners of such buildings are said to be real, live prospects from whom contracts for these installations can be secured. It goes without saying, however, that no real profits can be expected unless warm air heaters of merit are installed and this designation is stated to apply forcibly in the case of the Laurel Pipeless Warm Air Heater, shown in the accompanying illustration. The chief advantage attributed to this warm air heater is that it is very economical in fuel. It is equipped with a steel radiator for hard coal, coke, block wood or natural gas, or is furnished in all cast construction for soft coal, coke, block wood and natural gas. Full details can be secured from the Art Stove Company, Department F, Detroit, Michigan, or from the Western Branch at 727-729 West Van-Buren Street, Chicago, Illinois.

Laurel Pipeless Warm Air Heater.

HELPFUL ADVERTISING CARDS FOR WARM AIR HEATERS.

AMERICAN ARTISAN is in receipt of several advertising cards of warm air heaters that are quite interesting and show evidence of the progressiveness of manufacturers in impressing upon the public the benefits of their warm air heating systems. These cards are of heavy white stock, measuring about 17½ by 10½ inches, and are used for advertising purposes in street cars and in window and inside displays. Each has a colored, characteristic border, has the text printed in two colors and shows a black and white sketch in the right upper corner that effectively helps to emphasize the story on the readers' minds. The gist of the texts of the cards is that the houseowner will not shiver this winter if he installs a Rudy Warm Air Heater; that this warm air heater will positively reduce the ash piles; that it effects a great saving in fuel; and that it is built permanently tight of Rudy Charcoal Iron. All in all, they are commendable specimens of street car and store advertising and the dealer in Rudy Warm Air Heaters should no doubt be able to use them to advantage. For full details, address the Rudy Furnace Company, Dowagiac, Michigan.

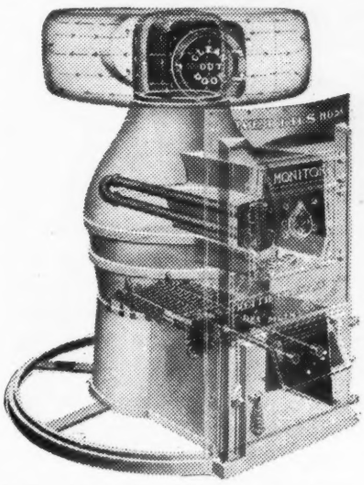
WARM AIR HEATER WITH ONE PIECE BRICK-LINED OR SECTIONAL CAST POT.

The Magee All-Cast Warm Air Heater, which is claimed to have been one of the leaders in its field for many years, is made with a one-piece brick-lined or a sectional cast iron firepot, the latter being embodied in the type shown in the accompanying illustration. It is furnished in six sizes and among its special features are the dock-ash or triangular grate for coal burning, which is described as durable in construction and heat resisting qualities, at the same time producing almost complete combustion of the coal. For wood burning a flat grate is furnished, made in two sections which, it is stated, can be removed or replaced at will through the feed door without disturbing any other parts, this flat grate being fitted to rest on top of the coal grate. According to the manufacturers, the Magee Furnace Company, Boston, Masachusetts, it is their aim to confine the selling and installation of their warm air heaters to competent agents, as individual heating conditions can best be determined by the heating engineer who is responsible for the faithful performance of his contract; but they hold themselves in readiness at all times to advise as to capacities and adjustment of apparatus. Further information, price list, etc., of the Magee Warm Air Heaters and Ranges, Boilers and Tank Heaters, can be obtained from Robert P. Burton, Distributor, 30 West Lake Street, Chicago, Illinois.

Magee All-Cast Warm Air Heater With Sectional Cast Iron Pot.

WRITE FOR THESE INTERESTING BOOKLETS ON WARM AIR HEATERS.

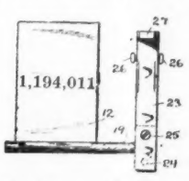
The quality of an article is judged by the service it renders, and this adage, it is said, has been the vital factor taken into consideration in the manufacture of Keith's Monitor Warm Air Heater, an "X-Ray" view of which is shown in the accompanying illustration. The booklets issued regarding this warm air heater point out that it was the policy and purpose of the founder, from the beginning, to produce an apparatus that would advertise itself favorably wherever used; that would justify the reasonable claims made for it by years of satisfactory service; that would present a good total of square feet of heating surface which really becomes hot; and that would be free from any complicated feature. This warm air heater, it is further stated, has stood the test for twenty-two years, and its specific points are illustrated and discussed at length, commencing with the bottom or base ring and considering the roomy ashpit, the triangular bar grates, the two piece firepot, the durable body section, the one-piece cast iron radiator, etc. The booklets further emphasize the symmetrical proportions of the Keith's Monitor Warm Air Heater, its panel front made in one piece, the double feed door opening, the large ashpit door, and the grates operated through the draft opening in the ashpit door, all of which may be noted in the illustration. Copies of these interesting booklets can be obtained upon request, from the Keith Furnace Company, Des Moines, Iowa.



X-Ray View of Keith's Monitor Warm Air Heater.

SECURES PATENT FOR DAMPER.

George V. Greey, Amityville, New York, and Richard Rouse, Jr., Newark, New Jersey, assignors to the Boynton Furnace Company, New York City, have secured United States patent rights, under number 1,194,011, for a damper described herewith: A damper of the kind described having a fixed pintle, a plate on the pintle extending at an angle thereto, a detachable lever adapted to extend from either end of the plate having a seat to fit the top and at least one end of the plate, and means for fastening the lever to the plate.



SLOTTED FIREPOT IN WARM AIR HEATER FOR BURNING SOFT COAL.

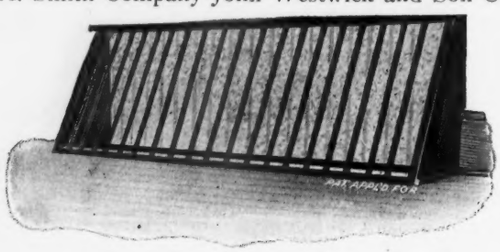
A two piece slotted firepot, when used with the flat drop grate, as is the case in the Globe Warm Air

Two-Piece Slotted Firepot in Globe Warm Air Heater.

Heaters, is said to be the most practical and economical style for burning soft coal because of its hot blast feature. In the operation of Globe Warm Air Heaters, the manufacturers state, superheated air is delivered into and over the fire, causing almost complete combustion and intense heat next to the firepot. The fire is said to always burn from the outside to the center, thus consuming the gas which is generated by the coking of the unburned coal in the center. The slots are described as being constructed so that they cannot stop up and thus reduce the efficiency of the system. This is made possible by forming the opening at the lower end of the slot larger than at the top, and by increasing in size the cells back of the slots so that any dust or fine coal that enters must fall into the ash pit. Equal expansion and contraction are stated to be assured because the shape of the firepot is such that there is an equal thickness in between and surrounding the slots. The firepot is but one of the many features of the Globe Warm Air Heaters, full particulars of which can be secured from the Globe Stove and Range Company, Kokomo, Indiana.

COLD AIR FACE WITH LARGE CAPACITY.

In addition to their line of warm air heaters, the V. A. Smith Company-John Westwick and Son Com-

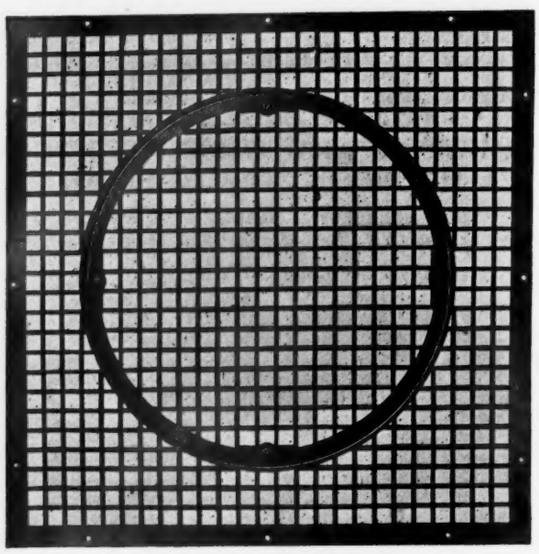


OakWall Cold Air Face.

pany, carry various styles and sizes of warm air registers, cold air faces, ventilators and borders that are described as being standard in size, interchangeable with standard makes, and fitting standard pipes and fittings. The general construction and finish of all of these is said to be of the highest grade and this, combined with their reasonable price, is said to commend them to discriminating installers of warm air heating apparatus. In the illustration herewith is shown the OakWall Cold Air Face, a representative of the Vasco-Westwick line, whose distinctive feature is the large capacity for taking in the cooled air, as may be easily noted in the illustration. To installers not acquainted with the merits of the warm air heater supplies the manufacturers will gladly send full details, together with free samples upon request. Application for these should be made to the V. A. Smith Company-John Westwick and Son Company, 213 West Lake Street, Chicago, Illinois.

LATTICE DESIGN DOUBLE GRATING FOR PIPELESS WARM AIR HEATERS.

The installation of pipeless or single-register warm air heating systems necessitates the use of a register or grating that will provide openings both for the cold air to enter and for the warmed air to pass out from the warm air heater. Various styles of these gratings are made to suit different conditions, among



Walworth Double Grating.

which is noted the Walworth Double Grating, shown in the accompanying illustration. This grating is manufactured in a lattice design with a square cold air return and a round center for the warm air supply. Five sizes are offered, all of which are said to be made of high grade materials and possess a neat appearance. Its simple construction makes it easy to install, the manufacturers state, while its durability assures lasting service. Complete stocks are carried for immediate shipment, and further details can be secured from the Walworth Run Foundry Company, Cleveland, Ohio.

From my experience with hot-air furnaces I am of the opinion that it is only on rare occasions that they leak gas. There is actually as much trouble from leaking steam pipes. The gas that usually gets into a house ordinarily comes from the furnace door and that is caused by a bad draft; the gas from the coal gets into the cellar and finds its way into the house. Gas from such a source occurs as often from a steam boiler as with a hot air furnace.—Professor Carpenter.

PRACTICAL HELPS FOR THE TINSMITH

PATTERNS FOR DIAGONAL GOOSE NECK.

BY O. W. KOTHE.

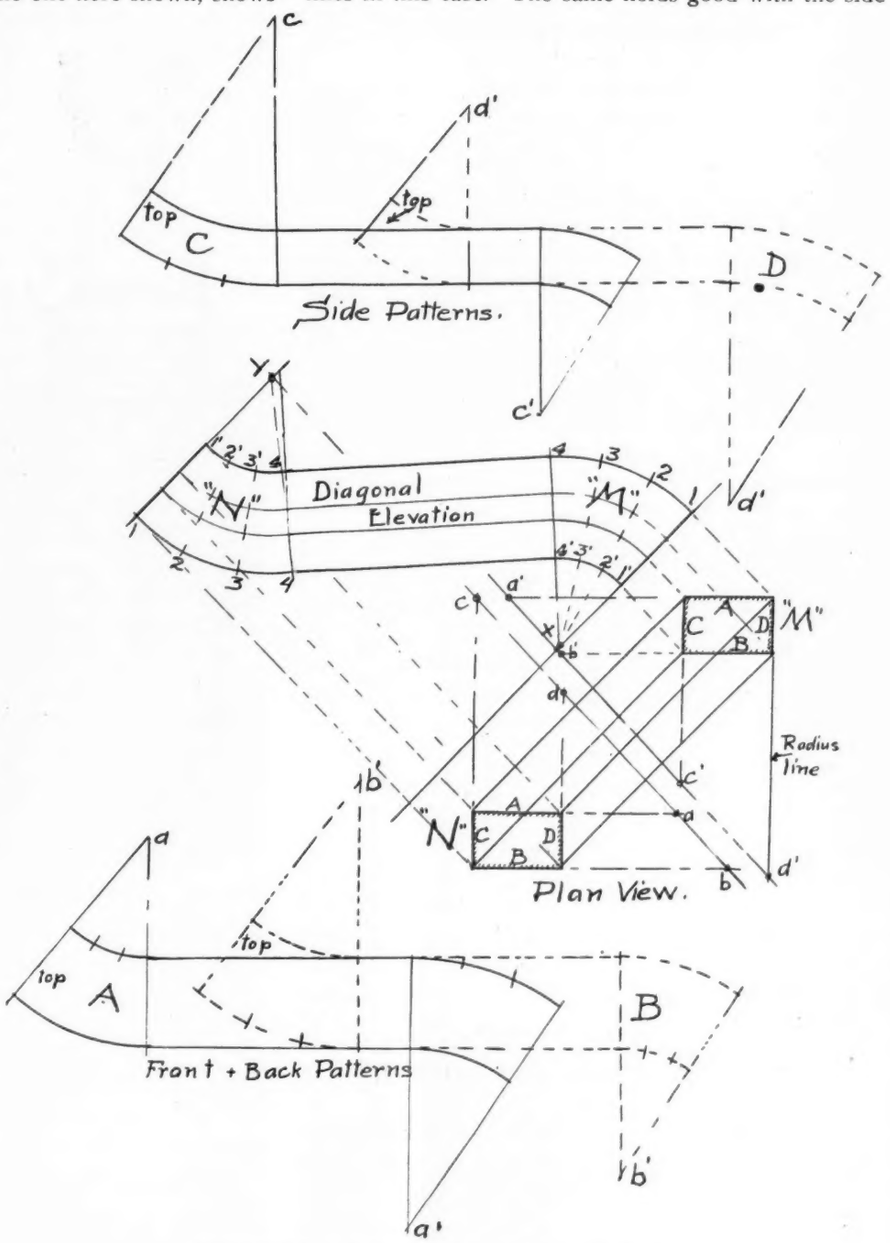
Men who work on pretentious dwellings often have peculiar spout fittings, and the one here shown, shows the diagonal angle in which it leads down to the inside corner of a building. There are also other methods of laying this out but this is the simplest and usually the best understood.

The first step is to take your measurement for offset of eave, and draw your plan view, letting the section "M" represent the wall leader. Then let the section "N" represent your gutter connection. Draw your lines connecting the corners, thus giving the diagonal view as shown. Now parallel with this angle in plan, draw a base line for the diagonal elevation, and from all points in section "M" also "N" square up lines indefinitely. Then measure the height for your goose neck and draw the top line Y-1 parallel to the base line. Now establish the point X equal to one of the long sides of section from 1', and using X as center strike the arcs as shown. Repeat this for the top "N," and then connect the arcs with parallel lines drawn tangent to the arcs of like number thus giving you the diagonal elevation as shown.

Now from the point Y also X project lines at right angles to the base line of elevation indefinitely which are to be used as centers for finding the radii to strike patterns. Having these lines drawn, then from the side A and B of "M," project over lines cutting the lines drawn from X in point a'-b' and also lines dropped from sides C-D cutting this line in point c'-d'. In like manner extend lines over from section "N" from front and back and sides, cutting the center line extended from point Y as in points a-b', also c-d which gives you the radii for the patterns.

The front and the back patterns can be laid out on the one strip as shown by the full lines and the dotted lines in this case. The same holds good with the side pattern. The heel lines 1-4 of diagonal elevation are divided into equal spaces and the lines drawn through the center X and Y, thus dividing the throat at the same time.

Draw two lines parallel to one another equal to the width of front or back of section as A or B in section. Make the length of these lines equal to the distance of the diagonal elevation as 4-4', then square

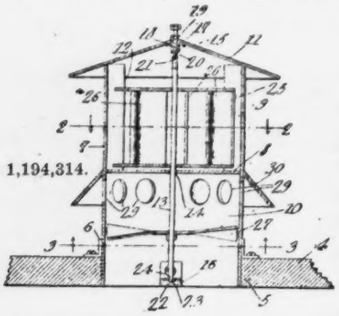


Development of Patterns for Diagonal Goose Neck.

out lines indefinitely from which the end arcs are to be described. With dividers pick the radius from the center a and the two corners of front A, and step over giving you point a in pattern and strike the arcs for top, measuring the arc for throat equal to the spaces 1′-2′-3′-4′. Then draw line through point a thus giving you the top. The same holds good with the bottom and is described with a radius taken from section "M" to a′. All the other patterns are described by taking the various radii and striking the arcs for either the top or bottom as the case might be. Laps for soldering should be allowed on the side pieces extra, which completes your pattern.

VENTILATOR IS PATENTED.

Peter Pearson, Menominee, Michigan, has procured United States patent rights, under number 1,194,314, for a ventilator described herewith: The combination with a structure to be ventilated, said structure having an opening in the top thereof, of a housing having an open end seated within the opening in said structure, said housing extending above the structure, an imperforate partition dividing the housing into a lower and upper compartment, said compartments being out of communication, there being outlet openings in the upper portion of the lower compartment and diametrically opposed front and back openings in the wall of the upper compartment, a central shaft extending longitudinally within the housing, an exhaust fan revoluble with the shaft and arranged within the lower compartment, a driving fan secured to the shaft and located in the upper compartment in position to be actuated by a current of air flowing through the said compartment by way of the diametrically opposed openings therein, the blades of said fan being V-shaped in transverse section and separated at their inner ends, and an endless hood extending around the casing above the openings in the wall of the lower compartrent, said hood extending downwardly across the openings and being substantially frusto-conical.



METAL CEILINGS FOR STORES.

The advisability of installing metal ceilings in homes, offices, stores and the like has been clearly demonstrated in numberless instances. It is not difficult to understand how such a ceiling, with its handsome design, durable construction and simple erection gives the customer greater satisfaction than a molded or plaster ceiling which is installed with much more labor and does not possess as much durability. Metal ceilings of this type, that are described as being tasteful and dignified in design, and practical in construction, are manufactured for all kinds of stores, under the name of Corco Metal Ceilings by the Wheeling Corrugating Company, Wheeling, West Virginia. According to the Company, these ceilings have repressed beads and die-cut nail holes, which make erection simple and inexpensive, and because of such advantages, they have been the choice of many hardware merchants and other retailers. Sheet metal contractors who are desirous of investigating the great opportunities in this field of metal ceilings for stores should write for full information and portfolio of designs to the Wheeling Corrugating Company, Wheeling, West Virginia.

AN UP-TO-DATE FIREPOT WITH SEAMLESS DRAWN STEEL TANK.

Unless supplemented by a very durable construction, the special features that any torch or firepot may possess are of little value in giving the tinsmith the service he expects. Besides embodying the innovations that have proven themselves of consequence, the device must have each and every part durably constructed of high-grade materials. This substantial construction and numerous efficiency features are said to be incorporated in the Clayton and Lambert line of torches and firepots, one of which, the Number 21 Coil Firepot, is shown in the accompanying illustration. This firepot is described as having a seamless drawn steel tank, large funnel and filler, heavy uprights, large valves, heavy malleable top plates, one piece steel shield and automatic brass pump. The burners and coils are made of extra heavy steel, producing, it is said, a steady blue flame in strong wind or extreme cold. Further details of this firepot and the others of the line are contained in catalog which will be sent upon request, by the Clayton and Lambert Manufacturing Company, Detroit, Michigan.

Clayton and Lambert Number 21 Coil Firepot.

AMERICAN ARTISAN BRINGS GOOD WORKMAN FOR TINSHOP.

To American Artisan:

We found a good tinsmith through our advertisement in American Artisan. Thank you.

Very truly yours,

Schneider Hardware Company.

Oconto, Wisconsin, August 14, 1916.

ITEMS.

The Stevens Metal Products Company, Niles, Ohio, has been incorporated with a capital stock of $50,000 to manufacture steel drums and other sheet metal products. The incorporators include W. H. Stevens, Edward Thompson, Harry M. Scriven, C. E. McConnell and H. A. Bergess.

The Modine Manufacturing Company, Racine, has been incorporated with a capital stock of $200,000, headed by Arthur B. Modine, formerly with the Perfex Radiator Company of Racine. This is a sheet metal concern and is established in the Sattley Building.

Metal Roofs Prove Superior Protection Against Conflagrations

That sheet metal will not burn is a fact admitted by all. That tar and all roofing materials of which tar is a component will burn is also generally understood. That wooden shingles are about the most inflammable material that can be used for roofing purposes is also an admitted fact.

And yet we find that wooden shingles, prepared roofing, composition roofing, "felt" roofing, "ready" roofing, are being used on buildings of all character in many more cases than the various forms of metal roofings.

The only reason for this is that neither the manufacturers of metal roofings, nor the erectors of same have made anything like the effort—in an advertising way—to prove the facts cited in the first paragraphs

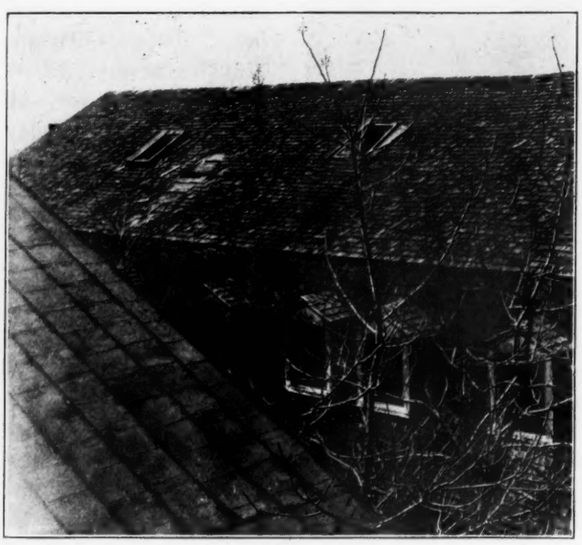


Figure 1.—Shows Wood Shingle Roof Which Caught Fire from Flying Embers from Blaze 1,400 Feet Away.

of this article to those who should be vitally interested —the house owners and builders.

There are thousands of instances where the circumstance that a building had a metal roof saved it from destruction by fire. There are hundreds of thousands of instances of buildings burned because they had roofs of inflammable material. All that is necessary is to bring these instances to the attention of the owners of homes and business buildings.

In the following are shown a few of the multitude of examples of this sort—some illustrating how fires spread to buildings with wood shingle roofs; others showing how metal roofs saved buildings from complete destruction.

In Figure 1 is shown the wood shingle roof of a building which caught fire through embers flying from a blazing flour mill fourteen hundred feet distant, at Grays, Maryland, on April 6, 1916.

Figure 2 shows a metal roof on the building in the center. This roof smothered the fire in that home, although the wooden sidewalks were partly destroyed. Note that the two buildings, to the left and the right, are practically a total loss. They had wooden shingles for roofing. This fire occurred May 8, 1916, at Woodlawn, Maryland.

Figure 2.—Tin Roof Prevented Total Destruction of Frame Building While Nearby Dwellings Were Entirely Destroyed.

In Figure 3 are shown two brick buildings the roofs of which were covered with tar roofing. It will be noted that there is very little left of the roofs. The fire which destroyed them was caused by sparks from a bonfire in a vacant lot nearby. Machinery valued at $20,000 was stored in these buildings and was rendered practically useless

The building in Figure 4 is located across the street from the two shown in Figure 3. Flying embers from the burning roofs ignited the wood shingle roof on this building, but failed to make any impression on the metal roof on the "lean-to," nor on that of the building on the right which was also of sheet metal.

Figure 3.—Tar Roofs on These Buildings Caught Fire From Bonfire. $20,000 Worth of Machinery Destroyed.

This fire occurred May 12, 1916, at Baltimore, Maryland.

In Figure 5 is shown a small Catholic church in Brooklyn, Maryland, the interior of which caught fire

in September, 1915. The structure was practically new and the dry wood of the fittings and the fresh paint made a fierce blast of fire that soon destroyed the rafters bearing the metal roof which caved in somewhat and, so to speak, put a blanket on the fire.

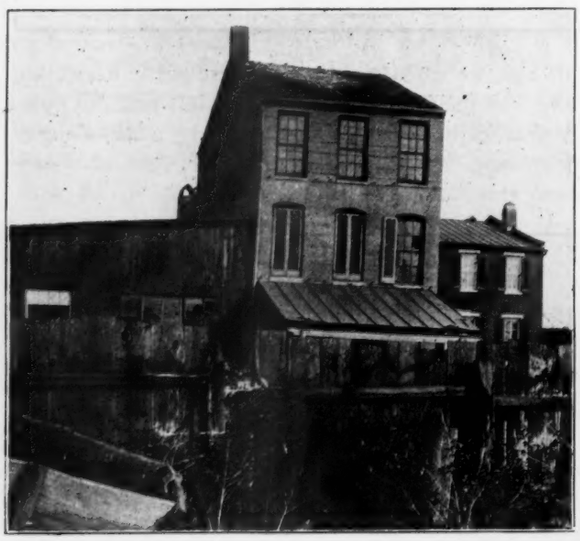


Figure 4.—Flying Embers Set Fire to Wood Shingle Roof, But Did No Damage to Tin Roofs on Lean-to and Building at the Right.

The illustration shows the roof bent back, thus exposing the burnt interior. Note how the front wall has sagged after the roof which held it in position was pulled loose. If the roofing material had been wood shingles or composition roofing it would have burned as fast as the framework.

There is no question that if sheet metal contractors will pay more attention to the results of fires in buildings the roofs of which were covered with wood shingles, "prepared or ready" roofing and other inflammable materials, they can materially increase their business and add to their profits.

The fact that metal roofing can be obtained in so many forms, suitable for every scheme or style of

Figure 5.—Tin Roof on Church Saved It From Total Destruction, Although Interior Was Badly Damaged.

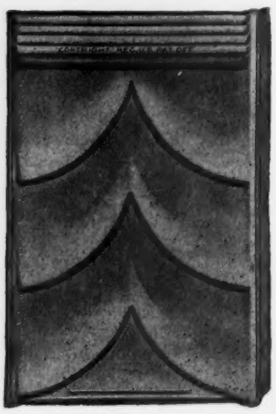
architecture, is a feature that should not be lost sight of.

American Artisan has always taken the position that from the standpoint of safety against fire, ability to withstand the influences of all sorts of weather and climatic conditions there is no material which can in any way approach metal roofing in its many varied forms, and nothing has been produced which for general serviceability and economy can compare with sheet metal for roofing purposes.

The important point is that the sheet metal contractors and the manufacturers of metal roofing must devise some plan by which these facts can be so impressed upon the public's mind that metal roofing will once more take its place as the "preferred" roofing material.

METAL SHINGLES GIVE LONG, INEXPENSIVE SERVICE.

It is a good deal to expect from a shingle roof that it will last a lifetime with no repair expense, but, according to the manufacturers, this is the very service that can be expected from Cortright Metal Shingles. As substantiation for this claim, it is pointed out that Cortright Shingles were placed on the market over 25 years ago and today many roofs on which these shingles were placed then are in first class condition. These shingles are made of red, green or galvanized tinplate and tight-coated galvanized sheets, and four designs are offered, known as Metal Slates, Victoria Shingles, Oriental Shingles and Imperial Shingles, the last of which is illustrated herewith. Each style and material is said to make a permanent roof that affords absolute protection against the elements, and the manufacturers state that they open up to the sheet metal contractor an excellent opportunity for increased business which will not conflict with his flat roof work. Details of their proposition can be obtained from the Cortright Metal Roofing Company, Philadelphia and Chicago.



Cortright Imperial Shingle.

ELBOWS ON DOWN SPOUTS MUST BE STRONGLY AND EFFICIENTLY CONDUCTED.

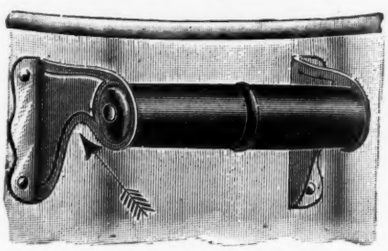
Because it must guide the flow of the water and consequently withstand the entire strain and wear of the down spout, the conductor pipe elbow must be of very durable and efficient construction or otherwise it soon becomes useless. To impart these qualities to the elbow, the following specifications are laid down by well known manufacturers: (1) The elbow must be of the proper angle. In other words, a sixty degree or less angle is always more appropriate than an elbow of greater angle, as it has a pitch and will drain dry. A ninety degree angle should never be used for a down spout, as it has no pitch and will not drain completely. (2) The elbow should at all times be made of a good

grade of new material and galvanized after formation, so as to cement the entire mass and coat all the raw edges. (3) Elbows used should be of a heavier gauge than the conductor pipe—for instance, a 29-gauge conductor should be fitted with full 28-gauge elbows; a 28-gauge conductor with 26-gauge elbows; and a 26-gauge conductor with 24-gauge elbows.

It is also recommended to sheet metal contractors that in the erection of conductor pipe systems, elbows should be used to get around all cornices, mouldings and obstacles, as the ordinary soldered joints are said to be far less durable and hence more expensive. The fact that elbows can be obtained in all angles from one crimp up—that is, from ten to ninety degrees, is stated to enable the contractor to erect practically every conductor pipe job without resorting to soldered joints. Further information relative to the use of conductor elbows and shoes will be gladly sent to sheet metal contractors upon request, by the Ferdinand Dieckmann Company, Postoffice Station B, Cincinnati, Ohio, manufacturers of an extensive line of elbows and shoes.

BOILER HANDLES OF VERY DURABLE CONSTRUCTION.

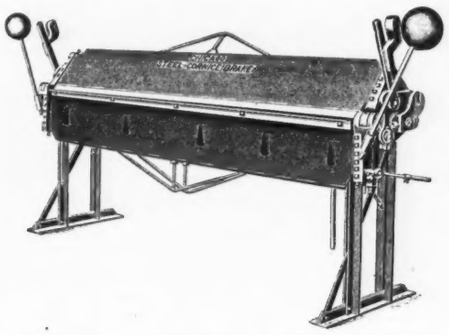
The satisfaction that a wash boiler gives is dependent to a great extent on the strength and durability of the handles. For this reason, boiler handles are made with a view to render long service, so that the boiler can be handled with facility throughout the entire period of its use. In the Keystone Boiler Handles, shown in the accompanying illustration, sturdiness of construction is obtained by making the clips from heavy sheet steel, brightly tinned and highly finished; they are cupped for the shoulder of the wood and have countersunk holes, so that it is said when the heavy rivets are upset and drawn tight, the wood can never become loose. The different types include regular sizes for oval boilers, regular sizes for square boilers, and hooked, medium heavy sizes for oval boilers. A similar handle for boiler covers is also included in the Company's line and samples of any of these, together with further information will be sent upon request to tinware manufacturers, who should address the Berger Brothers Company, 229-231 Arch Street, Philadelphia.



Keystone Boiler Handle.

USE OF STEEL IN CORNICE BRAKE CONSTRUCTION.

In the manufacture of steel, the metal is refined and in the rolling process is put to enormous pressure while hot, which forces the molecules into close contact. This results in making the steel uniform and reliable, besides imparting to it unusual strength. Because of this fact, the manufacturers of the Chicago Steel Cornice Brake, shown in the accompanying illustration, make it of steel, which they state gives a saving in weight and a decided increase in power and speed of operation over cast iron brakes. Hand in hand with the use of serviceable materials are the features of construction. The patented arrangement, for instance, consists of several steel plates placed in such positions that the strain is directly against the edge of the various plates, which condition is said to make for the greatest strength and accuracy. According to the manufacturers, the machines can be taken apart in three pieces and easily transported. Each cornice brake is furnished with a full set of formers, angle extension for heavy bending and an improved stop gauge. Further particulars are contained in catalog showing 116 different styles and sizes, which will be sent upon request, by the Dreis and Krump Manufacturing Company, 2915 South Halsted Street, Chicago, Illinois.



Chicago Steel Cornice Brake.

TORCHES EQUIPPED WITH DURABLE, EFFICIENT PUMPS.

The Never Leak Pumps embodied in the Always Reliable Gasolene Torches, one of which is shown herewith, are said to represent a great improvement because the plungers screw down and remain out of the way so that they cannot become bent and thus render the pump useless. This, the manufacturers state, is typical of the many features combining to make these torches recognized as among the best by all mechanics. The torch illustrated here has a brass bottom and burners made of special bronze metal, which is claimed to make the bluest and hottest flame, attaining a temperature of 2,000 degrees, Fahrenheit. It is equipped with reservoir of heavy drawn brass having the burner placed near the edge; extra fibre filler screw washer and leather cup pump washer, and a one-piece adjustable soldering iron holder which can be removed when not required. Jobbers will supply any of these at factory prices and dealers desiring further information should write for free catalog to Otto Bernz, Newark, New Jersey.

Always Reliable Number 17 Gasolene Torch.

The Illinois Corrugated Metal Company, Springfield, Illinois, will be in the market shortly for equipment.

GENERAL PUBLIC SHOULD STAND COST OF PROPER TRAINING OF APPRENTICES.

At the Institute for Directors of Industrial Education which was recently held at Madison, Wisconsin, Dr. Charles McCarthy of the Legislative Reference Library, in that city, read the following very interesting paper on "The Social Influence of Continuation Schools:

The Social Influence of Continuation Schools.

Labor is vitally interested in the Wisconsin Continuation Schools. With all our boasted democracy we have absolutely neglected the education of the working boy and girl. Labor, busy in organization, for a long time forgot to stand by its people injured in industry, and the sight of a man, smashed and broken by a machine, fighting his own case in court, without the help of his organization, was too frequent in our country. We settled that by putting the cost of the accident on the industry.

The sight of great colleges, universities and splendid high schools for the sons and daughters of the rich and nothing for the boy or girl who must work has also been too frequent in America. We have taken a page from Germany in the Wisconsin Continuation Schools. We have provided that working boys and girls up to seventeen years of age shall be given some sort of an education which will fit them for life and give them a chance to advance in any position they happen to be in. We must throw the cost of this education on industry for the good of industry as well as of the individual, just as we threw accidents, by the Workmen's Compensation Act, upon industry.

Strange it is that labor has not demanded its rights in this matter, strange that those who have been given the control over education, the universities and the school teachers, have not only not helped labor in this matter, have not been true to their trust or to the ideals of true democratic education, but have actually hampered the education of the working people. They have fought the Continuation Schools often in places in this country in the face of the most glaring discrimination against labor.

From a report in Chicago I got the following figures:

20,000 children in private commercial industrial schools paying about $1,500,000 in fees out of their own pockets.

18,000 children in public high schools in the city of Chicago, the city paying $1,114,000 out of the public treasury.

In other words, while all this row has been going on in Chicago in opposition to these continuation schools, you can get Latin and Greek for nothing, but if you want to prepare yourself for life, you must do it out of your own pocket.

We have heard school teachers laud on in opposition to the Continuation Schools as being un-American and German. 56 percent of the engineers of Germany come up from the ranks. The might and strength of modern commercial Germany is built upon the ambtion and endeavor of its working boys and girls. Germany has today a far more democratic system of education than we ever have had in America, with all our boasted ideals. Yet the school teachers oppose Continuation Schools. But where are the colleges and schools in America providing ways for 56 percent of the engineers to come from the ranks? We have just the opposite in America—layer upon layer of working people horelessly tied with very few openings and a lot of boys and girls who have wealth coming in from the top.

However, skillful we may make our mechanics, however much we give them to Industrial Education, our Continuation Schools must furnish the selling and buying, the drawing and planning, the mathematics, the figuring on the job, the stuff that is given to our college men, in order that they may have the road open for them, and we must open the road.

We must throw upon industry not only education till seventeen years of age, but till twenty-one years of age or over. If we are to be really efficient in this thing we must see to it that there is a way open to every boy or girl who wishes to come up the line, and we must not forget that we are making good citizens meanwhile.

The worst reactionary law in my opinion that was passed in the last session of the legislature was that which cut the Apprenticeship Law down to eighteen years of age. That retarded one of the grandest movements for the workingman ever started in America. Eventually that law will be repealed, for we can not get apprentices unless education is given to the apprentice which gives him a chance to advance up the line.

A manufacturer who was on the committee who proposed that law last session said we would have ten thousand apprentices. We have less than 100 who have joined who were under eighteen years of age. This is the way labor was deceived. The representatives of that committee were simply fooled when they agreed to have that splendid law cut to eighteen years of age.

Manufactures and labor will sooner or later realize that they have a common interest, for we can not have efficiency, unless we have the right kind of education. If the Continuation Schools are to be successful in the future, they will not succeed through the help of the universities and the school teachers who have so long dallied with fossilized methods in dealing with education, but they must come from the determined effort of manufactures and labor to see that the right kind of education is given to the working men. The school men of America have as a body showed themselves utterly incapable of handling this problem.

The whole future of labor depends upon a new system of part time education, part work, part school, part time up to 18 years of age, part time in the high school, part time in the university.

All along the line, an ambitious man who is working, should have the school brought to him, or he should be aided by manufacturers or aided by prizes from the labor unions. Every ambitious boy should have the door open before him. We have in Wisconsin made a desperate effort to maintain ourselves in our ideals in this respect against the whole country. I call upon the manufacturers and the laboring people of this state to see to it that not one jot or tittle of the Continuation School Law is destroyed and that it is constantly added to.

NOTES AND QUERIES.

Circular Slitting Shears.

From W. E. Gerrard of W. A. Puckett Hardware Company, White Horse, Yukon Territory, Alaska.

Please tell us who makes circular slitting shears for cutting elbows and circles.

Ans.—Bartlett Manufacturing Company, Detroit, Michigan; Bertsch and Company, Cambridge City, Indiana; H. Collier Smith, 810 Scotten Avenue, Detroit, Michigan; Niagara Machine and Tool Works, Buffalo, New York; and Peck, Stow and Wilcox Company, Cleveland, Ohio.

Niles 20 Double Acting Spring Hinges.

From S. Murray, Ainsworth, Nebraska.

Kindly advise who manufactures the Niles 20 double acting spring hinges.

Ans.—Invisible Door Check Company, 29 South LaSalle Street, Chicago, Illinois.

Tools for Sheet Metal Stamping.

From Treville Guillot, Thibodaux, Louisiana.

Can you tell me who makes tools for light sheet metal stamping?

Ans.—Berger Brothers Company, Philadelphia; Otto Bernz, Newark, New Jersey; Bertsch and Company, Cambridge City, Indiana; Dreis and Krump Manufacturing Company, 2915 South Halsted Street, Chicago; Friedley-Voshardt Company, 733 South Halsted Street, Chicago; Merchant and Evans Company, 347 North Sheldon Street, Chicago; Niagara Machine and Tool Works, Buffalo, New York; Peck, Stow and Wilcox Company, Cleveland, Ohio; and H. Weiss and Company, 20 Cliff Street, New York City.

Palace Aladdin Stove.

From W. O. Ott, Freeport, Illinois.

Can you advise who makes the Palace Aladdin stove?

Ans.—Burdett, Smith and Company, Troy, New York.

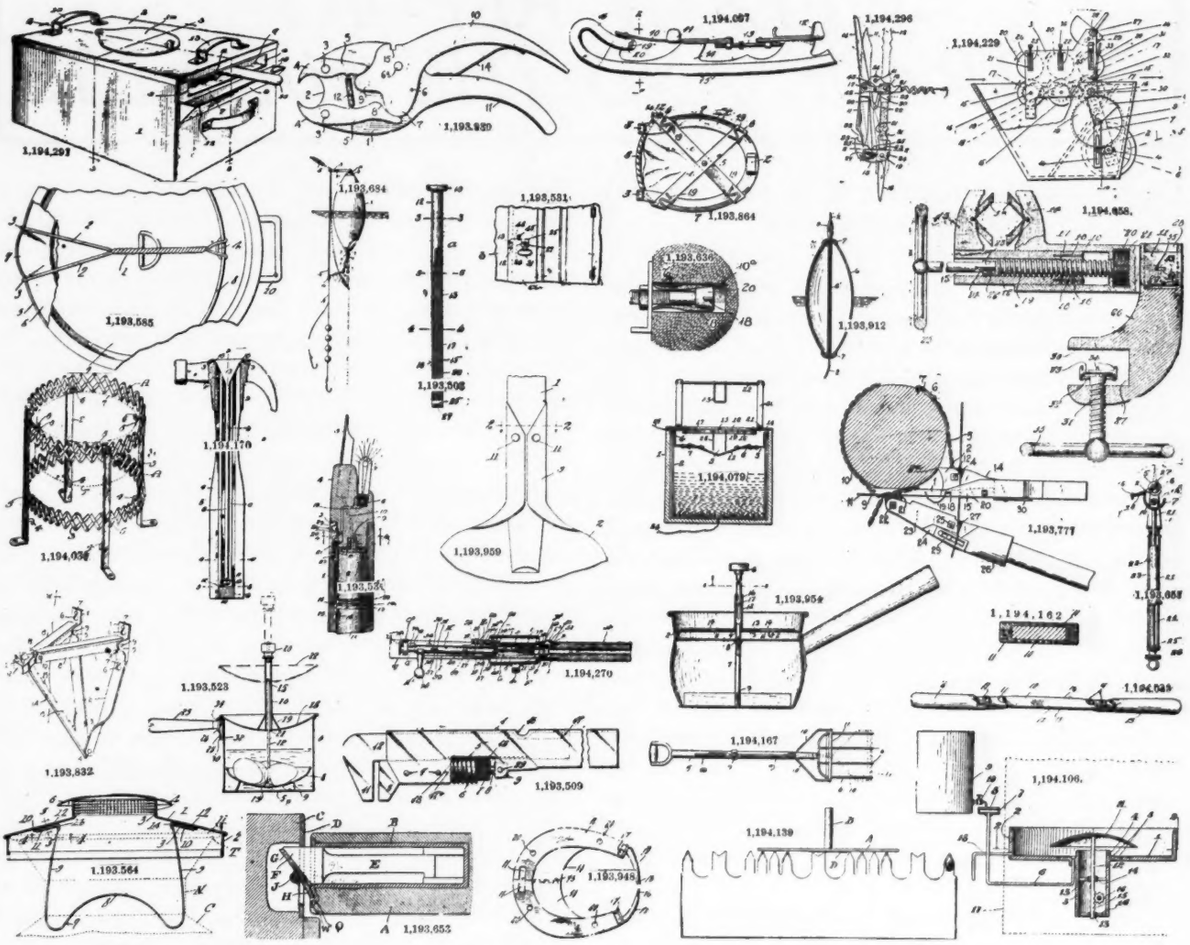
Stamping Dies.

From Treville Guillot, Thibodaux, Louisiana.

Please tell me where I can obtain special dies for manufacturing light sheet metal stamping.

Ans.—Hoeft and Company, 1600 West Kinzie Street; Monarch Tool and Machine Company, 1901 South Western Avenue; Walsh Press and Die Company, 4709 West Kinzie Street; all of Chicago, Illinois; and Niagara Machine and Tool Works, Buffalo, New York.

NEW PATENTS.



1,193,503. Wire Nail. Edward I. Braddock, Winchester, Mass. Filed Feb. 2, 1916.

1,193,504. Quick-Adjusting Wrench. Arthur Carp, St. Louis, Mo. Filed Jan. 23, 1913.

1,193,523. Egg-Boiling Device. William L. Deming, Salem, Ohio. Filed Apr. 1, 1914.

1,193,531. Fastening Device for Doors. Ira W. Fogg, Lynn, Mass. Filed November 3, 1915.

1,193,534. Fountain-Pen Flash-Light. Julius Friedman and Joseph L. Friedman, New York, N. Y. Filed October 5, 1915.

1,193,564. Sanitary Milk-Can Cover. Ernst Kreutzberg, Alhambra, Ill. Filed June 23, 1915.

1,193,585. Cover and Bail Holder for Cooking Utensils. Frederick Newell Martindale, Gouverneur, N. Y. Filed March 24, 1915.

1,193,636. Expansion-Bolt. Clarence B. Van Antwerp, Chicago, Ill. Filed September 25, 1915.

1,193,653. Safety-Lock. John Winn, Brookline, and Aaron Feinberg, Dorchester, Mass. Filed September 3, 1914.

1,193,655. Safety-Razor. Frederick W. Wood, Jasper, N. Y., assignor of one-half to Albert R. Smith, Rathbone, N. Y. Filed July 15, 1914.

1,193,684. Fishing Bob or Float. Walter W. Gregory and Peter D. Maire, Lakewood, Ohio; said Maire assignor to W. R. White, Cleveland, Ohio. Filed January 27, 1915.

1,193,777. Wire-Stretcher. William Sherman Graham, Ukiah, Cal. Filed February 19, 1916.

1,193,832. Scaffold-Bracket. Amos F. Seymoure, Albion, Ind. Filed April 22, 1916.

1,193,864. Detachable Calk-Frame. Oscar E. Brown, Buffalo, N. Y. Filed December 10, 1915.

1,193,912. Fishing-Tackle. Peter D. Maire and Walter W. Gregory, Lakewood, Ohio; said Maire assignor to W. R. White, Cleveland, Ohio. Filed January 27, 1915.

1,193,930. Staple-Puller. Theodor Schulz, Olivet, S. D. Filed April 22, 1916.

1,193,948. Horseshoe. Chris Truck, Grand Rapids, Mich. Filed April 7, 1913.

1,193,954. Cover for Cooking Vessels. Marcus A. Walden, San Francisco, Cal. Filed November 22, 1915.

1,193,959. Handle-Fastening. Albert L. Adams, Cedar Rapids, Iowa. Filed December 18, 1914.

1,194,030. Article for Household Use. Marian P. King, Brooklyn, N. Y. Filed March 6, 1916.

1,194,049. Scraper. Andrew F. Marsh, Plainfield, N. J. Filed December 14, 1915.

1,194,058. Cambination Wrench and Vise. Anthony Neumayer, Belleville, Ill. Filed May 14, 1915.

1,194,079. Rat-Trap. John Schack, Pittsburgh, Pa. Filed March 29, 1913.

1,194,097. Snow-Skate. Joseph John Tritz, Omaha, Neb. Filed April 7, 1916.

1,194,106. Liquid-Fuel Burner. William A. White and James McDonald, New York, N. Y. Filed April 19, 1915.

1,194,139. Gage for Saws. Sivert Buskala, Shine, Wash. Filed November 3, 1915.

1,194,162. Razor-Hone. Alvin A. Francis and Raymond F. Hill, Marcus, Wash. Filed September 8, 1914.

1,194,167. Pitchfork. Charles Garber, Clayton, Ohio. Filed March 7, 1916.

1,194,170. Tool-Handle. Frederick W. Grossmann, Mount Vernon, N. Y. Filed February 2, 1915.

1,194,229. Washing-Machine. Ernest N. Queen, Comanche, Tex. Filed June 8, 1916.

1,194,270. Magazine-Firearm. John Henry Blake, Washington, D. C. Filed April 7, 1915.

1,194,291. Cooking Utensil. May Hedrique, Farmington, Mo. Filed July 7, 1915.

1,194,296. Combination-Tool. Henry V. Jones, Newton, Mass., and Hugh McNally, Richland Center, Wis.; said McNally assignor to said Jones. Filed June 24, 1913.

WEEKLY REPORT OF TRADE AND THE MARKETS

LARGE STEEL ORDERS CAUSE STIR AMONG DOMESTIC BUYERS.

The chief feature of the iron and steel market during the past week has been the placing of large steel orders by representatives of the Allies. This purchasing has been going on for some weeks and is still in progress, a late report from New York stating that a contract calling for 500,000 tons of billets, rounds and forgings was recently placed with the United States Steel Corporation and several large independents. No confirmation of the placing of such a contract is to be obtained, but at the same time the shell steel market is in feverish condition, for many of the large American makers of munitions have not covered their requirements on the contracts distributed among them in the last three weeks and a famine of early-delivery material is expected.

It is becoming apparent that in certain finished steel products the mills will also fall short of delivery before January 1st, and an appreciation of this fact and of the forehandedness of foreign buyers has brought about a great stir during the past week among domestic buyers.

In the pig iron market, in which the buying was recently confined largely to export, more activity has been shown during the past week and in addition to large tonnages for export, the domestic demand is rapidly gaining in volume.

The non-ferrous metals during the past week have undergone a general reversal of form and practically all of them are characterized by an exceedingly strong sentiment and upward trend in prices. Copper appears to be the strongest of the metals and there is a brisk demand, both from foreign and domestic consumers.

STEEL.

In the Chicago market the situation on finished steel products becomes more complicated each week and many steel men believe that within a short time domestic consumers who have refrained from covering their requirements for the first half will find themselves shut out, and a scramble for material will result when it is too late to obtain supplies. The export business demands a high price and conditions have now reached the point where mills are willing to take on all the export business they can handle, believing that they have dealt as fairly as possible with the backward American buyer. Soft steel bars are quoted for contracts at 2.79 cents Chicago mill with small tonnages available from larger mills, and heavy premiums are asked by smaller mills which are in position to make prompt delivery. The demand for steel plates, especially for ship-building purposes, continues unabated and even at the advanced price of 3.19 cents, Chicago, mill buyers do not hesitate to close for such tonnages as they can obtain for delivery during the first part of 1917. The structural market, generally speaking, is dull and the recent advance in the prices of shapes have led many builders to defer work on the chance of picking up cheap lots of steel later on. Fabricators have not encouraged builders in this, but their own books are filled for several months and they are not particularly anxious to secure new business.

COPPER.

Copper appears to have been the strongest of the non-ferrous metals during the past week and a brisk demand has been maintained, both by foreign and domestic consumers. During the week brass manufacturers, wire makers and firms which have munitions orders on their books placed large orders at about 26½ cents per pound and these sales have removed a large part of the copper from the market that was available for October delivery. Little copper is now obtainable for this side of October, and leading producers quote 27 cents for Electrolytic, October delivery, with everything pointing to still higher prices. November and December Electrolytic are quoted at 26 to 26½ cents. Ordinary Casting copper is quoted at 24½ to 24¾ cents for prompt shipments. It is understood that deliveries for the last quarter will be greatly hampered, as refineries have been unable to keep pace with the increased production of mines on account of the labor shortage and the hot weather condition. The exports reported at the New York Customhouse up to and including August 16th amounted to 1300 tons, the total so far this month being 13,456 tons. Warehouse prices on sheet copper remain unchanged at 35½ cents base price.

TIN.

The tin market during the past week has been featured by an upward movement in prices, reported to be based on the probability that licenses for exporting the metal from England to this country might not be so readily obtained in the next few months. It is borne in mind, however, that such rumors, although frequently heard since the war broke out, have not yet materialized. Spot tin is quoted at 39⅛ cents, August 39 cents, September 38⅞ cents and October 38¾ cents. Chicago warehouse quotations have been advanced one cent, the new prices being 43½ cents for pig tin and 44½ cents for bar tin.

LEAD.

Although the demand for lead has been rather slow during the past week, prices are firm, due partly to the better sentiment underlying the metals generally and partly to the expectation that much lead business will result from the foreign shrapnel orders placed on

being placed. The leading interest has advanced its quotations to 6¼ cents New York City and 6.17½ cents St. Louis, while the outside market is now quoted at about 5.95 cents St. Louis and 6 to 6.05 cents New York City. Chicago warehouse prices have been advanced 10 cents, the new quotations being $6.50 for American pig and $7.00 for Bar, per 100 pounds.

SOLDER.

Solder prices have been advanced one cent by Chicago warehouses, the new quotations being: XXX Guaranteed, ½ & ½, 25½ cents; Commercial, ½ & ½, 23½ cents; Number 1 Plumbers', 21½ cents.

NUTS, BOLTS AND RIVETS EXPECTED TO ADVANCE.

In the Pittsburgh market, manufacturers of nuts, bolts and rivets have bought heavy tonnages of steel bars at 5.50 cents for future shipment, and it is not unlikely that the prices of nuts, bolts and rivets will be put up at an early date. Structural rivets are held at 4 cents and boiler rivets at 4.10 cents.

TIN PLATE.

In the tin plate market, manufacturers are being besieged on every hand by anxious consumers trying to hurry shipments on their contracts or to place additional tonnages to cover newly discovered needs. Although tin plate is quoted nominally at $6.00 a base box, consumers have found it almost impossible to place any new orders at this figure, as high as $7.00 being paid for nearby delivery.

SHEETS.

The quotations on black and blue annealed sheets show no change from those reported last week, even though sheets are now being rolled from sheet bars that cost considerably more than they did during the first half of the year. Prices are somewhat irregular, as stocks in the hands of some jobbers are being offered at concessions sufficient to upset the market, but the leading mills are holding quotations firmly and expect to see the situation stiffen materially before long. The nominal quotation of 28 gauge black sheets is 2.99 cents Chicago mill, while 10 gauge blue annealed sheets vary from 3.09 to 3.19 cents Chicago mill. Galvanized sheets are available at 4.20 to 4.40 cents Chicago mill with a moderate demand. Warehouse prices on galvanized sheets have been reduced 25 cents, the quotation for 28 gauge galvanized sheets being 4.85 cents per hundred pounds. Smooth sheet steel prices have fallen 10 cents per hundred pounds, the new quotation for Wood's smooth sheet steel, 28 gauge, being 4.15 cents.

OLD METALS.

Dealers in the Chicago iron and steel scrap and old metal market report no new developments during the past week, and generally speaking the market remains dull and neglected. The only tonnage moving is on previous sales. Scrap market observers appear to find indications of better conditions for the Fall. Wholesale dealers report quotations as follows: Old steel axles, $22.50 to $23.00; old iron axles, $22.00 to $22.50; steel springs, $14.00 to $15.00; Number 1 wrought iron, $14.75 to $15.00; Number 1 cast iron, $11.50 for net tons. Prices for non-ferrous metals are as follows per pound: Light copper, 17 cents; light brass, 10 cents; lead, 5 cents; zinc scrap, 6¼ cents; aluminum, 32½ cents.

SPELTER.

The spelter market has seen a large amount of business transacted during the past week at comparatively low prices. Traders characterize the tone of the market as fair and reports of sensational purchases are considered as exaggerated. Much of the business during the week has come from galvanizers and a still larger tonnage from abroad. There was also some eager buying for second hands and brass mills have closed for small tonnages. Prices have been headed upwards during the last few days. Prime Western spelter is now quoted as follows: Prompt, 9 to 9¼ cents; St. Louis; August, 8⅞ to 9⅛ cents; September, 8⅝ to 8⅞ cents, and last quarter, 8⅜ to 8⅝ cents. New York prices are 9 cents for Spot, 9¼ to 9½ cents for August and 8¾ to 9 cents for September delivery. Chicago warehouses have advanced their quotations on spelter in slabs ½ cent, the new quotation being 10 cents. Sheet zinc has been reduced $3.00, the quotations now being $18.00 in cask lots and $18.50 to $19.00 in less than cask lots.

PIG IRON.

The feature of the pig iron market in Chicago has been the inquiries for basic iron by melters in the East St. Louis district. Three consumers are asking for a total of 25,000 tons, and should this business be closed with Northern makers, it would do much to strengthen the market in this district and bring out a higher level of quotations. The pig iron market as a whole has shown decided activity and large consumers are making inquiry for bessemer and malleable grades. The demand for bessemer iron for export continues and sufficient is said to be offered to absorb the possible production until the end of the first quarter of next year. Inquiry for malleable has also increased and it seems probable that there soon will be active buying on this grade. Other inquiries for Foundry grades, some of which have been made very quietly, aggregate a large tonnage. In the Chicago market, sellers report that they expect a scarcity of steel making iron to manifest itself soon as a result of the heavy shipments abroad. Melters are now making inquiries for iron for prompt shipment and the volume of business actually done is showing some improvement. Some sellers say that all indications point to the materialization of a heavy buying movement within the next few weeks. Prices on Foundry and Malleable grades in the Chicago market remain steady at $19.00 to $19.50, furnace, respectively. Southern iron is not active and little inquiry is out. While most makers are asking $14.50 for last half and $15.00, Birmingham, for Southern Number 2 Foundry, some are said to be willing to take additional tonnage at $13.50 Birmingham for either delivery.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS.

PIG IRON.

Northern Fdy., No. 1	$18 50
Northern Fdy., No. 2	18 00
Northern Fdy., No. 3	17 50
Southern Fdy., No. 1	18 50
Southern Fdy., No. 2	18 00
Southern Fdy., No. 3	17 75
Lake Sup. Charcoal	20 75
Malleable	18 25

FIRST QUALITY BRIGHT TIN PLATES.

		Per Box
IC	14x20	$8 75
IX	14x20	9 70
IXX	14x20	10 75
IXXX	14x20	11 60
IXXXX	14x20	12 45
IC	20x28	17 50
IX	20x28	19 80
IXX	20x28	21 50
IXXX	20x28	23 20
IXXXX	20x28	24 90

COKE PLATES.

Cokes, 180 lbs	20x28	$12 60
Cokes, 200 lbs	20x28	12 80
Cokes, 216 lbs	IC 20x28	13 10
Cokes, 270 lbs	IX 20x28	14 95

BLUE ANNEALED SHEETS.

No. 10 per 100 lbs.	$3 25
No. 12 per 100 lbs.	3 30
No. 14 per 100 lbs.	3 35
No. 16 per 100 lbs.	3 45

ONE PASS COLD ROLLED BLACK

No. 18–20 per 100 lbs.	$3 00
No. 22–24 per 100 lbs.	3 05
No. 26 per 100 lbs.	3 10
No. 27 per 100 lbs.	3 15
No. 28 per 100 lbs.	3 20

GALVANIZED

No. 16 per 100 lbs.	$4 10
No. 18–20 per 100 lbs.	4 25
No. 22-24 per 100 lbs.	4 40
No. 26 per 100 lbs.	4 55
No. 27 per 100 lbs.	4 70
No. 28 per 100 lbs.	4 85
No. 30 per 100 lbs.	5 25

POLISHED SHEET STEEL.

No. 24 per 100 lbs.	$4 65
No. 26 per 100 lbs.	4 75
No. 27 per 100 lbs.	4 85
No. 28 per 100 lbs.	4 95

SMOOTH SHEET STEEL.

		Per 100 lbs.
Wood's Smooth	No. 20	$3 90
" "	No. 22-24	3 95
" "	No. 25-26	4 00
" "	No. 27	4 05
" "	No. 28	4 15

PATENT PLANISHED SHEET IRON.

Patent Planished Sheet Iron, 100 lbs. $9 11

PATENT PLANISHED SHEET STEEL.

Dickey Planished Sheet Steel 8½c

SOLDER.

XXX Guaranteed ½ & ½ per lb.	25½c
Commercial ½ & ½ "	23½c
No. 1 Plumbers "	21½c

SPELTER.

In Slabs 10c

SHEET ZINC.

Cask lots	$18 00
Less than Cask lots	$18 50 to $19 00

COPPER.

Copper sheet, base 35½c

LEAD.

American Pig	$6 50
Bar	7 00
National (White) brands (in less than 100 lb. lots), per lb.	11c
Sheet. Full coils per 100 lbs.	$8 25
Cut coils per 100 lbs.	8 50

ALUMINUM

Carload lots.

No. 1 Pure Ingot per lb.	$0 60
Sheets "	75

TIN.

Pig tin per lb	$0 43½
Bar tin "	44½

HARDWARE.

ADZES.

Carpenters'. Plumbs	35%
Coopers'. Barton's	15%
White's	15%
Railroad. Plumbs	35%

AMMUNITION.

Caps, Percussion—per 1,000. F. L., Waterproof, 1–10s	50
G. D	45
Musket	75
Shells, Loaded— Loaded with Black Powder	20&5%
Loaded with Smokeless Powder, medium grades	30&3%
Loaded with Smokeless Powder, high grade	40&3%
Winchester: Smokeless Repeater Grade	30&3%
Smokeless Leader Grade	40&3%
Black Powder	20&5%
U. M. C. Nitro Club	30&3%
Arrow	40&3%
New Club	20&5%

		Each.
Gun Wads—per 1,000. Winchester Gun Wads		8%
Powder. DuPont's Sporting, kegs		$10 25
" " ½ kegs		5 40
" " ¼ kegs		2 85
DuPont's Canisters, 1-lb		46
" " ½-lb		26
" Smokeless drums		26 10
" " kegs		13 20
" " ½-kegs		6 75
" " 10-can drum		5 40
" " ¼-kegs		3 45
" " canisters		60
L. & R. Orange, Extra Sporting kegs		$10 25
L. & R. Orange, Extra Sporting ½-kegs		5 40
L. & R. Orange, Extra Sporting ¼-keg		2 85
L. & R. Orange, Extra Sporting 1b. canisters		45
L. & R. Orange, Extra Sporting ½-lb. canisters		26
L. & R. Orange, Extra Sporting ¼-lb. canisters		18
Hercules "E. C." and "Infallible" drum		$26 10
Hercules "E. C." and "Infallible" kegs		13 20
Hercules "E. C." and "Infallible" ½-kegs		6 75
Hercules "E.C." and "Infallible" 10 can drums		5 40
Hercules "E.C." and "Infallible" ¼ kegs		3 45
Hercules "E.C." and "Infallible" canisters		60
Hercules W. A. .30 Cal. Rifle, canisters		$1 25
Hercules Lightning Rifle, canisters		1 25
Hercules Sharpshooter Rifle, canisters		1 25
Hercules Unique Rifle, canisters		1 50
Hercules Bullseye Revolver, canisters		1 00
Shot. Drop shot, sizes smaller than B 25-lb. bags, per bag		$2 70
Drop shot, B and larger sizes, 25-lb. bags, per bag		2 95
Buck shot, 25-lb. bags, per bag		2 95
Chilled shot, 25-lb. bags, "		3 25

ANVILS.

Trenton, 70 to 80 lbs.	9½c per lb
Trenton, 81 to 150 lbs.	9½c per lb

ASBESTOS.

Board and Paper $3 00 Cwt

AUGERS.

Boring Machine	70%
Irwin's	50%
Carpenter's Nut	70%
Hollow. Bonney's—list $30.00	75 & 5%
Stearns, No. 3	36 00
Post Hole. Digwell, 8-inch per doz.	12 50
Iwan's Post Hole and Well	40%
Vaughan's, 4 to 9-in. per doz.	8 00
Ship. Ford's, with or without screw	50%
Snell's " " "	40–5%

AWLS.

Brad. No. 3 Handled	per doz.	$0 45
No. 1050 Handled	"	95
Shouldered, assorted 1 to 4,	per gro.	3 60
Patent asst'd, 1 to 4	"	60
Harness. Common	"	95
Patent	"	90
Peg. Shouldered	"	1 50
Patent	"	65
Scratch. No. 1 handled	per doz.	7 00
No. IS, socket han'ld.	"	1 25
No. 7 Stanley	"	1 95

AXES.

Boy's Handled. Lippincott, 3 lb	per doz.	$6 00
Marshall Falls City	"	5 00
Magara	"	6 50
Broad. Plumbs, West, Pat		33⅓%
" Can. Pat		35 %
" Firemen's (handled)	per doz.	$19 00
Plumbs, Miners' (handled)	"	9 00
Single Bitted (handled). Warren Silver Steel		$10 50
Warren Blue Finished		10 50
Rough Rider		9 00
Perfect Premier, Forest Clipper		8 50
Single Bitted (without handles). Warren Silver Steel		$9 00
Warren Blue Finished		8 00
Rough Rider		7 00
Double Bitted (without handles). Blood's Champion, 3½ to 4½ lb	per doz.	12 50
Flint Edge	"	11 50
Perfect Premier	"	12 50

The above prices on axes of 3 to 4 lbs. are the base prices.
3½ to 4½ lbs. advance 25c.
4 to 5 lbs. advance 50c.
4½ to 5½ lbs. advance 75c.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$2 50	3 75	4 50	5 00

BALANCES, SPRING.

Pelouze 20%

BARS, CROW.

Pinch or Wedge Point, per cwt. $4 00

BASKETS.

Clothes. Small Willow	per doz.	10 00
Medium "	"	11 00
Large "	"	13 00

Galvanized Iron.	½ bu.	1 bu.	1½ bu
Per doz	$5 50	8 00	11 00

BEATERS.

		Per doz.
Carpet. No. 13 Tinned Spring Wire		$ 0 90
No. 11 Spring Wire coppered		1 30
No. 10 Preston		90
Egg. No. 50 Imp. Dover		$ 0 75
No. 102 " "	tinned	90
No. 150 " "	hotel	1 50
No. 10 Heavy hotel tinned		2 10
No. 13 " "	"	3 30
No. 15 " "	"	3 60
No. 18 " "	"	4 50

BELLOWS.

Blacksmiths'	65%
Hand. 8-inch per doz.	7 50
10-inch "	9 40
Moulders'. 12-inch "	12 60

BELLS.

Call. 3-inch Nickeled Rotary Bell, Bronzed base per doz.	$5 00
Cow. High Grade	60%
Kentucky	65&10%
Door.	Per doz.
New Departure Automatic Rotary.	$6 50
3 -in. Old Copper Bell	4 00
3 -in. Old Copper Bell, fancy.	6 00
3 -in. Nickeled Steel Bell	4 50
3½-in. Nickeled Steel Bell	5 00
Hand. Hand Bells, polished	40&10%
White Metal	40%
Nickel Plated	30%
Swiss	40&33⅓%
Silver Chime	33⅓%
Miscellaneous. Church and School, steel alloy	50%

Farm, lbs	40	50	75	100
Each	$1 90	2 40	3 55	4 75

BEVELS, TEE

Stanley's, rosewood handle, new list	Nets
Stanley's iron handle	Nets

BINDING, OILCLOTH.

Zinc	70%
Brass	60&5%
Brass, plated	75%

BITS.

Auger. Extra Double Spur	70&10%
Ford's Car and Machine	40&10%
Ford's Ship	50%
Irwin	50%
Russell Jenning's	30&10%
Clark's Expansive	65%
Steer's " Small list, $22 00	25%
" " Large " $26 00	25%
Irwin Car	50%
Ford's Ship Auger pattern Car	50%
Center	15%
Countersink. No. 18 Wheeler's per doz.	$1 80
No. 20 " "	2 40
American Snailhead "	1 10
" Rose " "	1 30
" Flat "	1 20
Mahew's Flat "	90
" Snail "	1 40
Dowell. Russell Jennings	30&10%
Gimlet. Standard Double Cut	40%
German Pattern per doz.	$0 60
German "	65
Gouge "	80
Spoon "	15%
Countersink "	1 30
Reamer. Jenning's Square "	2 50
Standard Square "	2 00
American Octagon "	1 75
Screw Driver. No. 7 Common "	55
No. 1 Triumph "	1 25